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WE have recently learned that several of our subscribers have failed to get their copies of NEW REMEDIES in season, or, in some cases, altogether. If there is *ever* any delay in the receipt of the journal, we shall be obliged if a notice is sent at once to the publishers.

EDITORIAL.

ALTHOUGH we have more than thirty medical societies in New York City, according to the last issue of the *Medical Register*, we still have need for another one.

There are three large and well-organized associations which consider topics of interest to the profession at large; others, in plenty, which are eleemosynary and social in their nature, and the specialists have each their group of kindred spirits, whether they be pathological, obstetrical, neurological, ophthalmological, dermatological, laryngological, or historical, in their tastes or practices. Even the gastronomical are provided for by the advent of a monthly dining-club, whose local habitation and name have as yet no official announcement in the green-book of the Medico-Historical Society. But still we need another, and that one is a Therapeutical Society. The field for cultivation of this much-neglected portion of our science is nowhere more promising than here. With an abundance of hospitals and dispensaries, public institutions, and physiological laboratories, at the command of our scientific men, almost the whole tendency, however, has, as yet, been to encourage pathological studies, until we run some risk of being criticized in the same way that the Vienna School was a short time since when Oppolzer died, and an English correspondent said that he was the last of the Old Viennese School, who considered it to be their chief duty to cure their patients; whereas, the New School of Vienna seemed to think their duty to their patients consisted in using all the means which the advancement of science placed within their reach to make an accurate and careful diagnosis, and then to wait patiently until it could be verified by an autopsy.

Excepting the Medical Journal Association, nearly all the papers read before the general societies (in contra-distinction from the special societies) have lately been upon surgical and pathological topics, while it is very rarely that any one, even of the numerous visiting physicians to our hospitals, presents a paper or opens a discussion on a purely therapeutical subject. It is in the special societies that therapeutical questions are most often considered, and these are of necessity limited in their scope.

We appreciate that with the present strife for

bread and butter, let alone notoriety and position, most men will naturally restrict their efforts to such scientific work as promises the quickest returns, either in the way of consultations or private patients, and with the present condition of our knowledge of therapeutics he who would become skilled above his fellows has not only a hard, but a long task before him; for while a knowledge of the pathology of disease may in great part be gained in laboratories and from books, the skill of the therapeutist is quite as much an art as a science, and requires for its acquisition a capacity for careful observation at the bed-side and a memory for detail which it is the fortune of but few to possess.

Our Pathological Society has become one of the greatest ornaments of the profession of this city, and its influence is felt all over our country. Why is it not time to organize now a Therapeutical Society, whose labors shall be a fitting supplement to the work so well commenced by its sister association?

American Pharmaceutical Association.

THE twenty-fourth annual meeting of this association will be held in Philadelphia, September 12th, and will be expected to be the largest ever attended, owing to the numerous attractions at present to be found there. Between the meetings and the centennial, the time of the members will be fully taken up, and there will be little time, and perhaps not very great desire for dissipation. The officers of the Association are: George F. H. Markoe, of Boston, *President;* Fred. Hoffman, of New York; T. Roberts Baker, of Richmond; Christ. F. G. Meyer, of St. Louis, *Vice-Presidents;* Charles A. Tufts, of Dover, N. H., *Treasurer;* John M. Maisch, of Philadelphia, *Permanent Secretary;* Adolph W. Miller, of Philadelphia, *Local Secretary;* C. Lewis Diehl, of Louisville, *Reporter on the Progress of Pharmacy.*

NEW YORK DRUG MARKET.

[*Prices given are for large lots from Importers' and Manufacturers' hands. For single packages an advance would be charged.*]

WE fear readers will become tired of the same old story of dull trade and discouraging business, that we have been recording for some months past, and no one would more heartily rejoice than ourselves could we note a change for the better, but as yet we cannot report any improvement; on the contrary, a worse state seems to exist than when we last wrote. Since our last, four houses in the trade here have suspended: one by "ways that are dark," and the others caused by shrinkage in values and inability to realize on their investments in time to meet their engagements. These causes, added to a very small demand for goods from jobbers and consumers, have so increased the timidity that the trade, to a man, feel in anything that is offered them, and sales of goods in round lots, at anything like fair prices is almost an impossibility. Where this is to end it would be hard to say, but it looks as if the drug trade, until now comparatively free from absolute disaster, would be called upon to bear its share of the burdens of bad debts, as well as the merchants in other lines of business, who have during the last two years been such heavy sufferers. We sincerely hope these fears may not be realized; but that there is serious cause for them cannot for a moment be denied.

Opium has continued to advance slowly, and at this writing the market is firm at $6.37½ gold. Recent dispatches and letters from Smyrna confirm quite positively that the crop will not exceed 3,000 cases, and heavy sales have been made there at constantly advancing figures. Here there has been but little done, the only reason being that speculators are afraid of anything and everything that has advanced ten or twenty per cent. That present prices are low seems almost certain, and we think dealers would run but little risk in investing liberally.

Morphia has been firm, and the price advanced from $4.40 to $4.50 for P. & W. R. & S. $4.40@ $4.45.

Quinia firm, and in good demand at 2.20 for P. & W.

Quicksilver has lately been advanced quite sharply here and in London, large sales having been made here at 50 @ 52½c. gold, the price closing at 55c. gold.

Mercurials have advanced only slightly, the quotations being, for Blue Pill 45c.; Corrosive Sublimate, 66c.; Mercurial Ointment, 40c. and 50c.; Red Precipitate, 86c.; White Precipitate, 96c.

Borax continues as last reported, city refined selling at 11 @ 11½c. California, 11 @ 11¼.

Blue vitriol is lower, sales of some large lots having been made at under 8c. The general jobbing price, however, remains at about 8c.

Alum is in good demand, lump selling at 2⅝ @ 2¾c.; English, 2¾ @ 2⅞c.

Salts. Epsom sells in round lots at 2c. Rochelle 31 @ 31½c.

Arsenic is dull, but little demand existing. 3½ @ 3¾c. gold for powdered.

Camphor is firm and without change at 27c. for city refined.

White sugar lead quiet at the advanced price of 18½ @ 19c. Brown sells at 12½ @ 15.

Citric Acid has been in brisk demand, and manufacturers have advanced their price to 80c. gold, at which they are at present unable to make deliveries. Outside holders are selling for immediate delivery at 82c. gold.

Chlorate of Potassium is in moderate demand at previous quotations, viz. 20½ @ 21c. gold, as to brand.

Iodide of Potassium remains as last reported, $2.45 @ $2.55 for C. P. & Co. and P. & W. in bulk and bottles.

Prussiate of Potassium dull, at 26½ @ 27c. for American and Scotch.

Carbonate of Ammonium in good demand at 13⅜c. gold, for English, in round lots, and 16½ @ 17c. currency, for Dodge & Olcott's American, in casks.

Muriate of Ammonium in moderate demand at 10⅜ @ 10¾c. gold.

Sulphate of Ammonium dull, American selling at 4¾ @ 5c. in lots.

Oxalic Acid in good demand at 10 @ 10¼c. gold.

Tartaric Acid sells in moderate quantities at 42 @ 42½c. gold for crystals, 48 @ 49c. for powdered.

Cream Tartar, although somewhat lower, has recently become somewhat firmer, owing to a firmer state of the foreign markets. American is quoted at 30c. gold, French 31 @ 31½c. gold, powdered 34½ @ 35½c. currency as to quality.

Cuttle-fish Bones are dull, and nominally held at 30c. for small bones. Large bones can be had at 28c.

Venice Turpentine continues, as last reported, dull at 17 @ 18c.

Balsam of Copaiba, through recent arrivals, has again declined, and can now be bought at 53 @ 54c. for prime quality.

Balsam of Tolu dull, and nominal at $2.60.

Balsam Peru is obtainable at $1.25.

Balsam Fir, Canada can be bought at $1.90 @ $2.00.

Cubebs quiet and without change, prime berries selling at 9¼ @ 9½c.

Cassia Buds nominally quoted at 39c., but the stock being large, this price could no doubt be shaded.

Star Aniseed in good stock, and can be obtained at 22c.

Gum Shellac, D. C. is obtainable at 40c. good seconds, English at 30c., and good native at 27 @ 29c.

Gum Myrrh is held at 34c. in cases, and 36 @ 37c. for prime, in balls.

Gum Mastic quoted at $1.75 @ $1.85 as to quality.

Gum Catechu is dull, prime quality being nominally held at 5¾ @ 6c.

Gum Assafœtida is dull, but little demand existing at unchanged quotations. Prime Calcutta tears are held at 13½ @ 14c., good Bombay, 12c.

Guarana is lower abroad, and the price here has declined to $2.50. Brazil advices, however, report a small crop there, and an improvement is looked for.

Squills sell in a small way at 10c. for prime white.

Aconite Root, prime German, commands 17½ @ 18c.

Colombo Root in moderate stock for prime qualities, which sell at 8 @ 9c. Poor grades, 7 @ 8c.

Rhubarb is in large stock, and the demand light, most of the jobbers having filled up before the advance. Holders are decidedly weaker, and are anxious to force sales, but without as yet accomplishing anything. Prices to-day range from $1.10 @ $2.25, but lower offers would no doubt be accepted.

Ginseng is in light demand, the market being rather nominal at $1.10 @ $1.15 for new Southern.

Canada Snake Root is scarce, and prime root is held at 35 @ 40c.

Ipecacuanha is not inquired for, and the price of $1.00 gold, is merely nominal.

Jamaica Ginger. Bleached is held at 19c. for prime. Unbleached, 16 @ 19c. as to quality.

Chamomile Flowers. Prime Belgian are out of the market. German are quiet, prime selling at 40 @ 45c., poorer quality, 30 @ 40c. Roman can be had at 16 @ 19 c.

Cantharides, prime Russian are in large stock, and are dull at $1.10. Powdered are quoted at $1.30.

Tonqua Beans, prime Angostura are jobbing at 85 @ 90 c., being in good stock.

Seeds. Canary is dull and lower, the advices from all the producing districts reporting abundant crops, and lower prices are looked for. Smyrna can be bought for $3⅜. Dutch, 3.70. Prime Russian Hemp Seed sells for $1.85. California White Mustard Seed, 8c. English do. 8c. Fennel Seed, German, 10½ @ 11½c. Trieste do. 9½ @ 10c. Italian Aniseed, 15 @ 16c.

Essential Oils are generally quiet but firm. Sanderson's Lemon is jobbing at $3.35 gold. Sanderson's Bergamot, $4.25 gold; other brands of Lemon, $3.00 @ $3.15 gold; other brands Bergamot, $3.75 @ $4.00 gold. Oil Cassia, 92c.; Oil Anise, $1.65, both gold. Oil Sassafras dull and lower, being obtainable at 48 @ 50c. Oil Citronella, native, 70 @ 75c.

To Write upon Glass. M. Terguem has communicated to the *Société industrielle du Nord*, of France, a process which permits of very permanent writing being done on glass with ordinary, or India-ink. For this purpose, the surface of the glass is gently heated over an alcohol lamp, or Bunsen gas-flame, until the vapor of water ceases to condense upon it, when it is to be coated with a varnish made after the following recipe. The materials are, 80 grammes of alcohol (90°), 4 grammes of mastic, and 8 grammes of sandarac. This mixture will be dissolved by heating it over the water-bath in a flask well stoppered and tied.

This varnish is very hard, and ought to be completely transparent; if the surface over which it is poured is cold, it becomes opaque. The glass surface coated in the manner described, may now receive any design or sketch drawn upon it with ordinary ink or india-ink. It is then covered with a film of any non-alcoholic varnish.

This procedure may be advantageously employed as a substitute for the labels commonly used on bottles in the laboratory and elsewhere, to draw or trace sketches on glass for magic-lantern projections, etc.—*Moniteur industriel Belge*.

MATERIA MEDICA.

Contributions towards the History of Some Drugs.*

BY PROF. FLÜCKIGER.

In writing our "Pharmacographia," my late friend Hanbury and myself have endeavored to trace the history of each substance as far back as possible, and to ascertain the date of the introduction into pharmacy of drugs—especially of those furnished by foreign countries. Many curious facts are connected with the way of their propagation throughout Europe, both in early and in the Middle Ages. As to England, I am entitled to suppose that there are existing but an extremely limited number of sources of valuable information about the subject under notice, which had escaped the careful investigation of my lamented friend. As to the Continent, there is in the library of the British Museum an interesting volume, marked $\frac{1373}{8}$ (Pharmacopœia), and entitled "*Valor sive taxatio omnium materierum medicarum, . . quae in officinâ pharmaceutica Swinphordianâ venundantur*," printed at Giessen, 1614. This is the tariff of drugs and compound medicines which were to be met with in the pharmaceutical shop of Schweinfurt on the Main, then one of the numerous free cities of the old German Empire. The establishment (apotheke) was not a private business, but remained from A.D. 1412 until the year 1803 the property of the commonwealth of that imperial town, and was managed—under the superintendence of the physicians—by an apothecary appointed by the magistrate. The tariff was therefore settled by this authority. The same may be said with regard to many other German towns, a fact which no doubt depends upon a good deal of public interest already devoted in those early times to pharmaceutical matters. Thus the volume alluded to contains not only the "tax" of Schweinfurt, but also those of Bremen (1644), of Basel (1647), of Rostock (1659), of Quedlinburg (1665), and Frankfurt (1669). Daniel Hanbury at once appreciated the usefulness of these documents, which we subsequently made free use of, as may be seen from several pages of the *Pharmacographia*.†

It was evident that similar medicine-tariffs must have been in vigor throughout the numberless states, so very different in size, which were formerly termed the German Empire; and not only tariffs, but most of them had their own pharmacopœia and medico-pharmaceutical laws. Since my late friend first drew my attention to the said volume in the British Museum, I have succeeded in perusing—for the same purposes—somewhat more than one hundred of similar lists or tariffs of German towns, ranging from the year 1558 down to the middle of the last century. They are scattered in various public libraries throughout Germany, but I learn from *A. N. von Scheerer's* "*Literatura Pharmacopœarum*," Leipzig, 1822, p. 232, that there are about forty more of the same periods, which I have not yet been able to consult. No other country, as far as I know, can boast of such a number of similar documents, which I think must be considered as an evidence of a somewhat advanced state of the pharmacy in those ages, although the fact may partly be explained by the extreme, and we may say absurd, self-government then prevailing among the Germans. In 1872 at last the way has been cleared forever by the "Pharmacopœa Germanica."

In abstracting the said tariffs, I have met with a good deal of information, which may some day prove useful to any author engaged in the history of pharmacy. I have therefore communicated my notes to the *Archiv der Pharmacie*, vols. 204 and 205 (1875–1876), from which they are reprinted under the title "*Documente zur Geschichte der Pharmacie*," Halle, 1876, 96 p. A few pages from this pamphlet may be permitted to be quoted in this place, in order to show that they afford even some further elucidation to questions which had been treated with a certain amount of care in the *Pharmacographia*. The sources from which the following facts have been borrowed are pointed out in the pamphlet.

Balsamum Canadense is stated ("Pharmacographia" p. 553) to have been noticed in England, A.D. 1761, but in my "Documente," p. 92, it is found to have been sold at Strassburg as early as 1759, as a current article of pharmacy of that country.

Balsamum Copaivæ. Its history is somewhat exhaustively traced out in "Pharmacographia," p. 201, and also (p. 184) that of a certain white American balsam, the latter being derived from several species of *myroxylon* and *myrocarpus*. It would appear from some tariffs abstracted in the "Doc." pp. 47, 52, 65, 68, and 69, that in some cases *Balsamum Americanum, s. Indicum, s. Mexicanum album* was probably intended for copaiba—for instance, in the private tariff of an apothecary of the city of Görlitz, of the year 1629. But in the Pharmacopœa of Amsterdam, A.D. 1636, editio sexta, *Balsam Copœyvæ* is distinctly enumerated. The authors of the "Pharmacographia" had not been able to find it mentioned in English pharmacy previous to the year 1677.

Balsamum Peruvianum. Perhaps *Balsamum Indicum*, of the tariffs of 1605 and 1607, quoted in the "Doc.," pp. 35 and 36, may mean Peru balsam; it is, however, expressly termed *Balsamum Peruvianum* in the tax of Mainz (Mayence), A. D. 1609, and what is more curious, the pods of the tree, *Fructus balsami indici*, are met with in the lists of Wittenberg in 1646, and of Nordhausen, 1657. These pods are still occasionally imported on account of the fragrant resinous contents of the large ducts around the seed. Their fragrance, which I am told is much appreciated

* Pharm. Journ. and Trans. June 24, 1876.

† pp. 77, 177, 234.

by perfumers, is quite different from that of the balsam itself (see "Pharm.," p. 184). *Balsamum Indicum nigrum fluidum* is another name frequently applied to Peru balsam; *Balsamum Hispanicum* ("Doc." 45 and 49) may rather mean balsam of Tolu. It is hardly possible to say what was *Balsamum Americanum s. Indicum verum*, p. 41.

Balsamum hispanicum siccum seu americanum resinosum in the tariff of Schweinfurt, 4th ed., 1644 ("Doc." 49), as well as *Balsamum Indicum durum* of Ulm, in 1648 ("Doc." 53), cannot be doubted but to mean balsam of Tolu. The product of *Myroxylon Pereiræ*, which is exclusively prepared on the balsam coast of San Salvador, having been formerly carried to Callao, the chief port of Peru during the Spanish dominion, the name of Peru balsam was given to it. This may account for the appellation of *Balsamum hispanicum*, which appears to have been bestowed upon the balsam of Tolu, inasmuch as it used to be immediately shipped for Spain—as it is still—from the ports of New Granada.

The earliest express mention of Balsam*us* tolut*anum* I have met with in pharmaceutical tariffs occurs in that of the city of Frankfurt of 1669, quoted in the "Doc.," p. 65. From what we stated in the "Pharm.," p. 177, it is probable that the drug was then likewise used in England, but there is no proof of the fact, as far as I can see; I would be glad, however, to be corrected in this opinion.

Benzoin began to be introduced as a commercial article in the beginning of the sixteenth century ("Pharm.," p. 362). It was abundantly obtainable in the middle of that century, for Hieronymus Cardanus states in his work, "De la Subtilité," French translation, 1556, p. 160, that "belzoi est de vile prix pour l'abondance." Benzoin, according to the custom of that period, was then submitted to destructive distillation, by which it yielded benzoic acid, which was first noticed by the famous French astrologer, Michel de Nostredame,* about the year 1556. This preparation appears to have quickly come into more general use; it occurs in the list of Görlitz (east of Dresden) of 1629, under the name of *Benzoi flores*.

Arnotto, the pulp of the fruit of *Bixa Orellana*, the well-known dye, occurs in tariffs of Wittenberg, 1646, Budissin, 1660, Leipzig, 1669, under the name of Orlian, which it still bears in German.

Cascarilla bark.—The Bahamas having been in the possession of the English from 1629 to 1641, the authors of the "Pharm." supposed it to have been first introduced in Europe by way of England; but no evidence at all has been found to prove the correctness of this suggestion. The said islands were occupied in 1641 by the Spaniards, and to them apparently is due the introduction of this bark. It bears a certain resemblance to quills of cinchona barks, and was, therefore, first noticed by the name of *China nova*, or cascarilla, which designations were no doubt of Spanish origin. It is said, however ("Doc.," p. 76), that it had first been mentioned in the pamphlet—"De machinis fumiductoriis," Hamburg, 1686, by J. A. Stisser, Professor in the University of Helmstedt, near Brunswick. I have not seen this pamphlet, nor that of V. G. Salat, of Valencia, Spain—"Unica quæstiuncula, in qua examinatur pulvis de Buarango vulgo *Cascarilla* in curatione tertianæ." Valentiæ, 1692. Both these pamphlets appear to be extremely rare, the first being not even quoted in Haller's "Bibl. Botanica." But in the list of Minden, 1691 ("Doc.," p. 74), I have found *China nova*, together with China de China —*i.e.*, true cinchona. There can be no doubt that this refers to cascarilla, for in another tariff of 1694 ("Doc.," p. 74), published at Gotha, Cortex *Chinæ novæ seu Schacorillæ* is quoted, as well as in several other lists abstracted in the "Doc."

(*To be continued in our next.*)

* "Excellent et moult utile Opuscule à touts necessaire qui desirent avoir cognoissance de plusieurs exquises receptes." 1556.

Historical Notes on Opium.

From a paper on this subject, by Dr. Otto Billinger, of Munich (*Inaugural-Dissertation*, München, 1876), which contains an interesting resumé of the history of opium in ancient and mediæval times, we have prepared the following abstract, and have added to it some commentatory and occasionally emendatory notes of our own, wherever it has seemed to us to be necessary.

The author's aim was not to present a complete history of the drug, as this would involve a study of the chief medical works of all nations, from Suçruta and Charaka[1] down to our days; but to give merely the main data from ancient and later writers, collected by him.

We find opium mentioned already in the oldest medical writings of the Hindus, besides aconite,

[1] All current works of reference still continue to ascribe a very great antiquity to these medical authors. The fact is, however, that we only know the works, *which we possess* under their names, to have been composed *not later than the 8th century after Christ*, at the end of which *Ibn Beithâr* and *Albirûni* translated the work of Charaka, and (according to Ibn Abi Uçaibiah), also that of Suçruta into Arabic. It is very probable, from internal evidences of the works, that various theories and practices have been borrowed from the Greeks (see *R. Roth, Zeit. D. Morg. Ges.* 26, 441), although the measures and weights, which the physician is ordered to use, are those in use in Magadha and Kalinga, that is, in the eastern districts, which have never come into contact with the Greeks. As to Charaka, the legend relates that "Çesha, the snake-king, who was in possession of the *âyurveda*, descended upon earth on a visit of curiosity. Seeing so much suffering and death, he felt compassion, and thought of a plan to alleviate these evils. He became the son of a Muni ('holy seer'), and received the name of Charaka. From the works of the ancient physicians Agniveça and Âtreya he composed a new one." Suçruta is reputed to have been the son of Viçvamitra and the disciple of Dhanvantari. But it is utterly impossible at present to fix the dates at which these works have been composed, for Hindu chronology is in a very unsatisfactory condition, owing partly to the didactic poetical form, in which most of the literature is composed, and which does not per-

hashish and other narcotics, under the name *aiphena*.[2] It was principally in use in cholera, against which Charaka, in his Ayurveda[3] recommends a mixture of assafœtida, adstringents, rock-salt, white pepper, and opium.[4]

Egypt was celebrated already in ancient times for its excellent opium. Galen especially praises that raised at Thebes as particularly efficacious. The same is done by the later Arabic physician Avicenna. Opium was a principal remedy of the Egyptians, together with blood-letting, squills, and the mysterious Kyphi.[5]

The Israelites probably learnt the use of the remedy from the Egyptians, although theriac is only met with in the Talmud, the medical portions of which are taken from Greek sources.[6]

The knowledge of opium, like that of many other useful agents, reached the Greeks probably from the Egyptians. Homer already mentions a "pain-assuaging" drink,[7] the preparation of which Helena learned from Polydamna, the wife of Thon, king of Egypt.

The writings of Hippocrates[8] do not mention opium, but allude merely to the use of poppy-seed.

The Alexandrian physicians, however, already are acquainted with it. According to Dioscorides, Erasistratus[9] treated snake-bites by a mixture of opium and castoreum, but forbids it in affections of the eyes and ears.

Andreas of Karystos,[10] a pupil of Herophilus, and court-physician of Ptolemæus Philopator, according to Dioscorides, one of the most celebrated pharmacologists of his time, first drew attention to the adulterations of opium.

Apollonius[11] is stated by Galen to have used opium likewise in combination with castoreum.

Among the Empirics, Heraclides of Tarent,[12] deserves particular mention, on account of having studied the effects of opium, and having established exact indications for its use.

About this time Nicander of Kolophon[13] composed a poem in hexameters, entitled "Alexipharmaca," in which he first draws attention to the sudorific properties of opium.

The word opium is probably of purely Greek

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mit much interlarding of dates,—but mainly to the desire of the leading caste to ascribe the real origin of all knowledge and science to divine agency, which was accomplished by establishing a relationship of the reputed authors with the deity, whereby all inquiry after the date of their real existence was obviated and often made impossible. *Charaka's* work exists so far only in manuscript; *Suçruta's* âyurveda has been published in the original in Calcutta, 1835–36, and in Latin translation by Fr. Hessler in Erlangen, 1844–50, and notes by the same, 1852–55. *Wise's System of Hindu Medicine* is a compilation, made for the author by some medical Pandits, chiefly from the work of Bhâva, the son of Miçralatakana, and contains many erroneous statements, as may be seen by a comparison with the original (see *Aufrecht Cat. Cod. Sansc.*, p. 311).

[2] This word should be written *aphena*, and occurs with the meaning of "opium" only in very late writers, for instance, in the *Râjanirghanta*, a medical dictionary, composed by Haraharipandita, of Cashmeer, a few hundred years ago. *It is not found* in Charaka or Suçruta. The Sanscrit aphena really means "foamless," and has afterwards been stretched to ahi-phena, "snake-foam," as a name for opium. It is also called âphûka, and niphena, ("foamless.") Of course, the coincidence of the borrowed word, with a real Sanskrit word, having a meaning of its own, is accidental. It is also called khaskhasa-rasa ("poppy juice").

[3] *Ayurveda* is the general term for "medical science." It is considered to be a supplement to the Atharvaveda, and is divided into the following eight branches: 1. surgery; 2. diseases of the head and its organs; 3. diseases which affect the whole body; 4. mental diseases (ascribed to demoniacal influence); 5. diseases of children; 6. on antidotes; 7. on elixirs; 8. on the means to invigorate the generative powers.

[4] This is a mistake. The receipt, to which reference is made here, is very common in Hindu medical works, and contains: *haritaki* (myrobalans), *hingu* (assafœtida), *sauvarchala* (Sochal salt), *vacha* (calamus), and *ativisha*. The latter word, meaning "very poisonous," has, together with its synonym *upavisha*, been later used of poisons generally, and perhaps of opium (according to *Monier Williams, Engl. Sansc. Dict.*, s. v.). But there can be little doubt that it means here *Aconitum ferox*, as usual. See *Haughton's Beng.-Sansc. Dict.*, s. v., and *Wallich's Plantæ Asiat. Rar.* (where the plant on plate 41, however, is *A. Napellus* and not *ferox*).

[5] We have, thus far, no direct testimony that the ancient Egyptians were acquainted with opium, although the later Greek writers make allusions to it. According to *Unger's* investigations (1857), Thebaic opium was unknown to the ancient Egyptians. Squills very likely occur in the *Papyros Ebers*, but the corresponding term of the original has not yet been recognized. On the composition of *Kyphi*, see *Medical Record*, April 15, 1876.

[6] The fact that no earlier Hebrew authority than the Talmud mentions theriac appears to prove that the Israelites were unacquainted with opium, and that the Egyptians, with whom they had warlike and commercial intercourse, were—at least at the time of the captivity of the Jews—likewise unacquainted therewith.

[7] Odyss., 4, 220–221: Εἰς οἶνον βάλε φάρμακον, ἔνθεν ἔπινον, νηπενθές τ' ἀχολόν τε, κακῶν ἐπίληθον ἁπάντων, "Then he threw into the wine, of which they drank, a grief-allaying remedy, soothing and causing obliviousness of all evils." It must, however, not be forgotten, when drawing chronological conclusions from Homer, that the text of the Homeric poems, as we possess it, has only been permanently established by *Peisistratus* (died 527 B.C.), and has received further modifications by later Alexandrian "diaskeuasts." On the Homeric *Nepenthe* we possess a number of monographs, the most curious of which are the first one, written about 1620, by *Petrus Lasena*, a lawyer of Naples, and another by *J. G. Graevius* (8vo, Frankf., 1689), who concludes it to have been a preparation derived from *Oenopia* or *Oenothera*. See also *Acta Erud. Lips.*, Nov., 1689, pp. 575–578.

[8] Born at Kos about 470 B.C., died about 356 at Larissa. It is necessary to be very cautious in drawing any *chronological conclusions* from the works which we possess under his name, as the genuineness of none of them can be established beyond doubt. They, however, undoubtedly correctly represent his ideas, and may have been based upon genuine writings of his.

[9] Born at Ioulis upon Keos, court physician of Seleucus Nikator, of Babylonia, about 304 B.C.

[10] About 216 B.C. See *Polyb.* 5, 81. *Athen.*, 3, 115, e; 7, 312, d.

[11] There have been a number of celebrated physicians of that name. The one meant is probably the pupil of Herophilus, and lived about 220 B.C.

[12] About 250 B.C. Wrote, περὶ σκευασίας καὶ δοκιμασίας φαρμάκων, "*On the preparation and examination of remedies.*"

[13] About 150, B.C. Wrote two poems: θηριακά, "Remedies against Snake-bites, etc.," and ἀλεξιφάρμακα, "Antidotes against Poisons." The first word, "*Theriaca*," means really, "remedies against wild or poisonous animals," from

origin; at least it is generally considered to be the diminutive form of ὀπός, "juice." [14]

We have to mention here one of the most remarkable medical writers, namely, the well-known Mithridates,[15] king of Pontus. He is famous through the peculiar experiments which he made upon his own body with various poisons and antidotes. He kept a record of his observations, and after the downfall of his empire, and his death, these "memoirs" (ὑπομνήματα) fell into the hands of the victor, Pompejus, who caused them to be translated into Latin by his manumitted slave, the grammarian Lenæus.[16] This work contained the formula of the general antidote, called after its inventor, "Mithridatīum;" it contained 40–50 ingredients, the principal of which was opium. In later times a few other ingredients were added, and the preparation formed the celebrated theriac.

The Romans seem to have received the opium through Greek physicians. The first of these of whom we have a somewhat more detailed knowledge, was Asclepiades,[17] who was held in great repute at Rome. Galen says of him that he also used opium in combination with castoreum. He also relates of the Methodists,[18] a school which had accepted many theories of Asclepiades, that, after they had succeeded in allaying pain by the drug, and the patient happened to die under its influence, they still boasted of having cured the disease. The author through whom we are best informed in regard to this sect is Cælius Aurelianus,[19] a physician who lived at the end of the fourth century, A.D.

Plinius, as well as Dioscorides, makes a distinction between opium and meconium, while Galen already uses the two terms as identical.[20] At the time of Plinius,[21] the use of opium seems to have been already quite extended; but the scientific treatment of diseases had already begun to make room to unthinking empiricism and to faith in quacks and nostrum venders. One of the most noted of these, Philo of Tarsus,[22] invented an opiate called after him Philonīum; and Andromachus of Creta,[23] the court physician of the emperor Nero, completed the transformation of the Mithridatīum into theriac, by adding various new ingredients, among them chiefly the flesh of vipers. The latter became a precious article, and in some places slaves are said to have been exclusively occupied with the chase and capture of these reptiles.

Among the writers on pharmacology, we must notice particularly Scribonius Largus[24] and Dioscorides.[25] The latter exactly describes the manner of incising the capsules, and collecting the juice, which latter he calls ὀπίζειν. He also refers to the adulteration of the drug with the juices of glaucium and lactuca, fat, and gum. As antidotes he recommends oxymel and salts. He also observed that the odor of the drug invades the whole body of the person who has taken it, which statement is repeated afterwards by Paulus of Ægina.

Galen[26] held opium in great esteem. He disapproved the roasting process to which it was often subjected, and usually combined it with castoreum, or gave it mixed with generous old wine..... Galen's teachings were followed for a long time with the most scrupulous exactness, and especially Alexander of Tralles (sixth century)[27] and Paulus, of Ægina,[28] two Byzantine physicians, are mentioned here.

Based upon the medical system of the Greek physicians is that of the Arabs. The science was cultivated and propagated among the latter through the learned schools founded by the Nestorians in Asia Minor. As the cultivation of certain branches of the medical art, however, is in conflict with

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θηρίον, "the beast;" later it was employed of special remedies, and has finally come to mean a preparation of opium.

[14] Ὀπός, etymologically related to Latin sap-io, German Saf-t, English sap, is commonly used of the sap of the fig-tree, used for curdling milk. Later Greek writers use the terms ὄπιον, ἐπιούμ, ἄφιον and πιόν, according to *Du Cange*. An Opium Cyrenaicum is mentioned by *Theod. Priscian.*, 112, D. See also *Meyer's Gesch. d. Bot.*, II., 37, III., 70. The Sanscrit names were mentioned above in note 2. The Chinese terms, also derived from western nations, are O-fu-yung, Ya-pien, O-pien. See *Pharmacographia*, p. 41.

[15] Lived 121–64 B. C. The φάρμακα Μιθριδάτεια are mentioned by *Appianus de bell. Mithrid.*, 248, where he relates that M., intent on self-destruction, attempted suicide by poison, but failed on account of being proof against it, and took his life by throwing himself against the point of his sword.

[16] See *Sueton. de ill. Gramm.*, 15, *Plin. h. n.*, 24, 9, 41.

[17] Asclepiades Eretricus (that is, the follower of the Eretrian philosopher, Menedemos), from Bithynia, physician, philosopher, and teacher of rhetoric; friend of Licinius Crassus; about 100 B. C.

[18] Those who treated disease in a methodical, systematic manner, as opposed to the Empirics.

[19] Born at Sicca, in Numidia; lived in the *second* century, A. D. We possess two of his works: 3 books on acute diseases, and 5 books on chronic diseases.

[20] Meconium is an extract of the poppy-leaves and heads; opium the inspissated juice of the capsule. *Plin.* 20, 18, 76. 25, 10, 81. 19, 8, 53 ("used often for self destruction"). *Dioscor. de Mat. Med.*, 4, 65.

[21] Born at Novumcomum, 23 A. D. Lost his life during the eruption of Vesuvius, 79 A. D.

[22] About 75 A. D. Τὸ Φιλώνειον is mentioned by *Galen*, ed. Bas., IV., p. 215, and *Celsus*, 6, 6, 3; according to the latter it consists of washed white of lead, spodium (tutty), gum, and roasted opium ("poppy-tears").

[23] About 60 A. D. *Galen. de antidotis*, ed. Bas., I., p. 433. *Fabric. Bibl. Gr.*, IV., 356.

[24] Scribonius Largus Designatianus, author of a work, "*De Compositione Medicamentorum*," accompanied the emperor Claudius upon his expedition against Britain (43 A. D.) as physician.

[25] Pedianus Dioscorides, from Anazarbos, in Cilicia, lived shortly before Plinius (see note 20). We possess his 5 books, περὶ ὕλης ἰατρικῆς, *On Materia Medica*.

[26] Claudius Galenus, born at Pergamum, 131 A. D., died some time between 200 and 203 A. D. Of his medical works, one hundred, of various contents and extent, are preserved and considered genuine; 18 are doubtful, 19 are only in fragments, and 24 others ascribed to him are spurious. A new critical edition, by Prof. Iwan Müller, is being published.

[27] Alexander, from Tralles in Lydia, physician at Rome. Wrote 6 books of *Therapeutics*.

[28] Very little is known of him. Best edition (English, with commentary), by *Francis Adams*. 3 vols. *Sydenham Society publ.*

Muhammedan religious views and customs, Arabic physicians with preference cultivated pharmacodynamics, and we owe to them many valuable additions to our materia medica. Theriac is one of their favorite remedies; the celebrated Arabic philosopher, Averroës[29] even wrote a Tractatus de Theriaco. Wonderful cures are related of this compound; so it is related of the Khalif Al-Motawekkil,[30] that he caused his guests at table to be bitten by poisonous snakes, in order to be able to cure them afterwards by some extra-powerful theriac.

The most celebrated of the Arabic physicians, Avicenna,[31] recommends opium especially in diarrhœa and diseases of the eye. The maximum dosis is 2 danich, which is, according to Wedel's "Opiologia," as much as one scruple. Serapio[32] gives it in doses of 1 to 2 danichs; the dosis letalis, according to the latter, is 2 ℥. Avicenna himself met his death by an overdose of the drug.

Maimonides,[33] the pupil of Averroës, recommends theriac in all varieties of poisoning; and Ibn el Beitar,[34] the greatest botanist of the Arabs, who treats of opium at great length, follows Galen in recommending castoreum as its antidote and corrective.

Theriac was used as a popular house-remedy during the period of reformation under the name of "Triackel" (= treacle), and the dealer was simply called "triackel-mann" (treacle-man). But gradually the more intelligent physicians began to discourage the use of it, and in later times the aid of the police had to be employed to prevent its being used. It was prepared for the last time at Nuremberg as late as 1754; at Würzburg in 1736, under many ceremonies; and at Paris in 1787. In the first-named city it had been prepared for the first time under supervision of the senate and many ceremonies, between Nov. 9, 1594, and Jan. 10, 1595, for it was regarded as the master-work of the apothecary. It is yet much used in the East. Theriac having thus entirely superseded the pure opium during the Middle Ages, the latter had to be, so to say, rediscovered. This was accomplished by the school, by which the Galenic system was overthrown, and the chief representative of which is Theophrastus Paracelsus.[35] The latter introduced a more simple form of opiates, being opposed to complicated remedies. He named his preparation "*Laudanum*," the etymology of which is dubious. The opponents of the "chemists" explained it by *lauda non!* (bad Latin for "do not praise"); the "chemists" themselves regarded it as an abbreviation of *laudatum opiatum* ("the praised opiate"); others have endeavored to find in it a corruption of *anodynum* with prefixed article, thus: *l'anodynum*. It is, however, more probable that the word is a corruption of *Ladanum*, which denotes a vegetable resin, previously much in use.[36]

The rest of the paper follows the history of opium down to the time of Sertürner, and we reserve it for another occasion.

CH. R.

The Opium-Monopoly of the Indian Government.

THERE are three main sources of revenue in India: the rents from farm-tenants, the salt-tax, and the opium-monopoly, the existence and success of which latter is based upon the importation of the drug in China, after the latter country had been compelled, by force of arms, to open its ports to the trading ships. The Indian Government appoints agents all over India, whose duty it is to grant licenses to such farmers (*ryots*) as may be entrusted with, or desire to engage in the cultivation of opium. The agent registers the farmer's name, measures his land, and advances him money (technically termed *tuckary*), a sort of

[29] Latinized from Ibn Rushd. Born at Cordova, 1126, died at Marocco, Dec. 12, 1198. His writings, only preserved in Latin translation, are chiefly commentaries to Aristotle, and also of medical contents, as, for instance, his *Colliyât*, or *Medical Therapeutics*. Best ed., Venice, 1489. In 11 fol. vols. A hope of obtaining the original has lately been raised. Napoleon Ney, namely, French Special Commissioner in Africa, for some time has tried to revive the old trade-connections which once existed between the coast of the Mediterranean and the tribes of the Sahara. For this purpose he studied the old Italian and Arabic authors, from whom he learned that Tlemcen, Oran, Bougie, Constantine, and Tunis once yielded to European merchants ivory, gum, indigo, etc., and received in return linen, silks, glass and metal wares, and arms. And he found the surprising statements, that caravans, which penetrated as far as the Tschad Lake, *carried thither manuscripts of European classic works*. And the learned traveller, Henry Duveyrier, the most thorough expert of the western Sahara, is convinced that the *library of the Sudanian Sultan at Sokoto contains the works of Greek and Arabic physicians, and even a translation of Aristotle.*

[30] 847–861 A. D.

[31] Latinized from Ibn Sina. Full name, Abu-l-Ali Ibn Sina; born 980, at Alfsenna, in the present province of Bochara, died at Hamadan, 1037 A. D. His medical "Canon" formed the basis of medical and therapeutical knowledge for centuries afterwards.

[32] There were two Serapios. One is Yahya ben Serabi, or the elder S., of Damascus; and the other, who is meant here, is Ibn Serabi, who lived about 1090 A. D. His work is entitled: *Kitâb ul-adwiyati 'l-mufradat*, "*de simplici medicina.*"

[33] Moses ben Maimon, vulgarly called Rambam, the great Jewish rabbi, born at Cordova about 1131. Died 1204. He was a physician (in Egypt) and a great authority in law and philosophy.

[34] Abu Muhammad Abdallah ben Ahmed, of Malaga, known by the short name of Ibn Beithar. Died 1248.

[35] Phillippus Aureolus Theophrastus Paracelsus von Hohenheim. Born 1493, near Zurich, died at Salzburg, Sept. 24, 1541.

[36] Ladanum, or Labdanum, is a resinous exudation of *Cistus Creticus* L., *C. Cyprius* Lam., and *Cistus ladanjferus* L. This is occasionally written *laudanum*, as, for instance, in *Plin. Valerian*, 1, 1, fol. 13 (see *Langkavel, Beitr. zur Gesch. der Botanik*, p. 13), and in rabbinical works of the Middle Age. The Talmudic equivalent is *lidna* (*Ketubot*, 77, where it is named as remedy for running eyes and nose), and it is identical with *Heb. lot* (*1 Mos.*, 37, 25). The Mishna (*Shebüt* 7) identifies it by saying that it comes from the Cistrose.

artificial and extra inducement to engage in the enterprise.

As soon as the poppy-plants have appeared above ground, the whole land covered thereby is again exactly measured, and, in proportion to its extent, a second advance of money may be made to the farmer, provided his neighbors will act as his sureties.* At the time when the produced opium is delivered to the government-agent, these advances are deducted from the price paid to the producer, who is compelled to sell to Government only. All the annual produce throughout India is collected at the two chief depots, Patna† and Ghazeepore‡, and after being subjected to various operations, to improve its quality and appearance, it is shipped to Calcutta or Bombay, where it is sold on account of Government by public auction. A very small quantity only remains in the country for home consumption.

This whole system is naturally open to many strictures and censures, particularly as the Indian Government, in order to foster and promote the cultivation of opium, had to impart a sort of underhand artificial stimulus to its consumption. Not to mention China—in reference to which see our article in last number, page 199—the fact has leaked out that the English have actually disseminated in a systematic manner a taste for opium in Burmah! While its use was prohibited in that country on pain of death before the advent of the English, a short time after their first arrival agents of the Bengal Government began to corrupt the younger population by the gratuitous distribution of the body-and-soul destroying drug. And while the Burmese in former times were a hardy, frugal, and industrious people, it has in our days, according to the testimony of the English themselves, sunk to a very low level of morality and vigor.

In spite of all these facts, it must be confessed that at the present moment there is very little prospect of an abolition of the monopoly by the Indian Government. For, in the first place, the revenue derived from it constitutes one of the most important items of Government receipts, and, in the next place, the monopoly furnishes maintenance to such a numerous army of officials,§ that all attempts at its abolition, which have heretofore been made, either in the British Parliament, or through the public press, have proved abortive. The Persians have been the only ones to succeed in causing a diminished demand for their opium in China, not through any conscientious scruples on their part, however, but owing to their excessive cupidity, by mixing such large quantities of oil, especially in late years, with their opium, as to impart to it a peculiar flavor obnoxious to the consumer, although the quality of the drug in other respects leaves nothing to be desired, which is shown by the brisk demand for it by Continental and American manufacturers of morphia.

* Cases of wilful defraudation of the Government by *Hindu* land-tenants, to whom advances have been made, are extremely rare; *Muhammedan* farmers are somewhat less scrupulous.

† Chief place in the Patna-district of the presidency of Bengal, on the Ganges, distant from Calcutta by water 464 miles.

‡ In the Ghazeepore district of the north-west provinces, on the Ganges, distant 157 miles from Patna, 598 miles from Calcutta. Ghazeepore is celebrated for its rose-water, and fine attar of rose.

§ In fact, the encouragements held out too fficials were too powerful to be resisted. The collectors of the land-revenue were appointed to act as deputies to the opium agent, and were allowed a commission on any increase of produce raised in their district.

Oil of Orris-Root.

While commenting upon some portions of the German Pharmacopœia, Prof. Flückiger remarked that the usual derivation of orris-root from *Iris Florentina*, L., is incorrect, because this species is very little known or cultivated in the neighborhood of Florence, and probably is not even a native of Italy. The species *Iris Germanica*, L., which is found from northern India, through Asia Minor and the southern coast of the Mediterranean as far as Morocco, furnishes (beside *Iris pallida*, Lam.) the greatest part of the commercial orris-root. These three species can be easily distinguished, except in the case of fresh root-stocks, grown in the classic home of orris: namely, Pontasieve, near Florence. Hence it may be objected, that practically it is immaterial which species of orris may be regarded as genuine source. Orris-root has been used for over 2,000 years on account of its fine odor. This is, however, entirely absent from the fresh root, which has only a faint and by no means aromatic odor, developing the well-known aroma only after drying, no doubt, in consequence of chemical changes hitherto unknown. On subjecting the dried root to distillation with water, there is at last found floating upon the condensed water an aromatic substance congealing to a crystalline mass, which is highly esteemed by perfumers, and is prepared for commerce by a few large distillers, namely, Herrings & Co., in London, and Schimmel & Co., in Leipzig. The price per kilogramme is put at M. 2,400 (= 800 Thl. Pruss.) by the latter firm. Prof. Flückiger has been informed that the utmost yield of the root, when fully exhausted, is only 0.1 per cent. in solid oil, which is of a light-brown color, of the consistence of cerate, and has the delicious odor of violets.* H. A. Vogel was the first to examine the oil or stearoptene of orris, but his scanty observations are without practical value.† Afterwards Dumas communicated to the French Academy (in 1835) the result of his investigations of this substance, to which he assigns the formula $C_5H_8O_2$.‡

* One part dissolved in 3,000 to 4,000 parts of dilute alcohol produces an extract of violets, one drop of which will perfume a handkerchief for several days.

† Gmelin, *Org. Chem.*, VI., 338.

‡ *Journ. de Pharmacie*, 21 (1835), 192. Also Gmelin, l.c.

Having obtained a sample of the oil from the London manufacturers, Prof. Flückiger succeeded, after repeated crystallizations from alcohol, and with the use of animal charcoal, to obtain it in colorless crystalline laminæ, the exact form of which, however, could not be ascertained. During this process of purification, it was noticed that the odor became more concentrated in the mother-liquor, while the crystals gradually lost it, until they were in the end entirely devoid of the particular aroma. Their alcoholic solution did not rotate the plane of polarized light, and strongly reddened litmus-paper, moistened with alcohol. After renewed crystallization, the melting point of the substance rose to near 52°; less pure crystals melted at a somewhat lower temperature. A much more impure substance must have been in the hands of Martin and Marais,* who found "orris-camphor" to melt at 32°; it is not at all surprising that carbon disulphide, which they used, extracts the aroma from the root, but this liquid dissolves in addition a very soft resin, tannin, and also probably a little fat, and is altogether unable to furnish at once a pure product. Besides, in the present case, where the amount of oil obtainable from a given weight of the root is so exceedingly small, the use of this volatile solvent is rather impracticable.

The purified crystals yielded to Prof. Flückiger figures, corresponding to the formula $C_{14}H_{28}O_2$, which, together with the physical characteristics of the substance, prove it to be *myristic acid.* Having ascertained this fact, it was easy to withdraw the fat from the crude product: it is only necessary to digest its alcoholic solution with anhydrous sodium carbonate (or bicarbonate), in order to obtain a soap-solution, from which, on addition of a stronger acid and after dilution, myristic acid is precipitated; on heating the liquid to 60° C., the acid rises to the top as an oily layer, congealing to a crystalline mass a few degrees below 50° C. By repeating this process, the melting point may at last be brought up to that of the pure acid. The faintest trace of accompanying etheral oil, or of lauric acid ($C_{12}H_{24}O_2$), which may accompany it, has the tendency of lowering the melting point.

The observations made upon the English oil of orris were repeated by Prof. Flückiger upon the German, and both were found to be identical, consisting mainly of myristic acid, accompanied by a little ethereal oil. On digesting the crude product with lead oxide, in a closed flask, the oil may be separated as a brownish thick liquid, remaining fluid at —10° C.

Since the orris-stearoptene can only be obtained by most thorough and energetic distillation, requiring two days for 50 Kilos., and only yields 0.1 %, it is almost impossible to state the yield in essential oil; it certainly cannot exceed 0.01 %. It is very likely a member of the hitherto unstudied "ferment-oils," as it is not met with in the living root, which has an altogether different odor.

Attempts of Prof. Flückiger to detect free myristic acid in the root itself (merely dried), gave a negative result, at least on the small scale.

The fact that the fixed myristic acid is carried over into the distillate, together with the essential oil, may be explained by the phenomena and laws of diffusion. Oil of rose is accompanied in a similar manner by an odorless and scarcely volatile stearoptene. The ethereal oil of laurel carries along small quantities of lauric acid; and similar facts have been noticed in the cases of oil of lavender and Roman chamomile. The presence of the myristic acid in the oil is probably owing to a fat, which exists in the root and is decomposed by steam.—*Arch. der Pharm.*, 1876, 481.

* *Journ. de Pharm.*, 11 (1870), 490.

A Useful Mode of Administering Chloroform.

In No. 226 of the *Medical Times*, a correspondent who writes from London recommends the following simple form of anæsthetic apparatus:

"With many practitioners it must often happen that they must administer chloroform and perform their obstetric operations single-handed. Here the administration of the anæsthetic causes great anxiety.

* * * * *

"Still, for obstetric purposes, chloroform is yet chiefly used, and such use has been found singularly free from danger. A pleasant, safe, and economical method of administering it will be found in placing a handkerchief in an ordinary tumbler, and then dropping some chloroform upon the handkerchief, the tumbler after this being held to the nose. The advantages of such plan are these. The tumbler cannot be so applied as to entirely exclude an admixture of air along each side of the nose. Then but a small quantity of chloroform is used, for as soon as each pain is over, the tumbler can be placed bottom upwards on a plate, and the loss by evaporation reduced to a minimum. So slowly does the evaporation take place, that the medical attendant can add the chloroform required at intervals himself, and so be sure of the quantity. Further, in emergencies the patient may administer the chloroform herself, the glass falling from the hand as soon as unconsciousness creeps over her. In this respect this plan is much superior to the old one of giving the anæsthetic on a handkerchief alone, which often kept its place after the hand had lost all command over it. As a means of administering chloroform in ordinary cases, the practitioner will find this plan to possess great advantages, and to secure the patient very safely against danger as well as to be most convenient and economical. Where it is necessary to intrust the administration to a nurse while the medical attendant is engaged otherwise, by this means all risk is avoided, and occasional supervision is all that is necessary."

PHARMACY.

Extract of Malt.

EXTRACT of Malt has become a popular dietetic remedy, and is particularly esteemed as a demulcent and nutritive food for children. Its syrupy appearance, however, offers many inducements to fraud. The simplest and cheapest adulterant is glucose (-syrup), which is in general use by brewers to increase the amount of extractive matter in beer. But there is no ready method known to detect this admixture. And as a complete analysis is in most cases impracticable, the consumer must generally rely upon the honesty of the manufacturer.

Hager reports having received a sample of malt extract, which in external appearances resembled the genuine completely, although it had a peculiar faint foreign taste.* From its behavior towards reagents, in which it greatly differed from the genuine, it was judged to be a mixture of glucose, glycerine, and about thirty per cent. extract of malt. To confirm these results, comparative reactions were made with three samples of extract of malt, one of which had been evaporated in an open vessel, and had a darker color than the others. The main difference between extract of malt and glucose (syrup) is probably the amount of soluble modifications of proteïn-bodies in the former. It might be conjectured that the adulteration with glucose would produce a greater amount of reduction in alkaline copper solution. But the results obtained do not permit any such conclusion to be drawn; one gramme of the three last named extracts reducing respectively 43, 44·5, and 46 c.c. of the copper solution, while the submitted sample (X) reduced 48.5 c.c.

The presence of glycerine in moderate quantity, say up to 10 per cent., cannot be called an adulteration, as it is no doubt added for the purpose of preserving the extract; but then the glycerine must be employed in a pure state. The above mentioned sample of extract (X), however, contained 26 per cent. of glycerine (extracted by ether-alcohol), which could not have been very pure, owing to the considerable quantity of calcium chloride present.

Hager considers the examination of the following points sufficient to decide on the genuineness and qualities of a malt extract.

1. The extract must have its own peculiar sweet taste and the refreshing odor of fresh bread.

2. The watery solution must be nearly clear. On dissolving 5 gms. of the extract in 45 gms. of distilled water, under stirring and without heat, a slightly cloudy solution is obtained, which may be filtered without difficulty. The insoluble matters were found to be different under different circumstances, and consisted of amorphous coagulum, ferment-bodies, and columnar, four or six-sided (sometimes also star-shaped) crystals.

3. 10 c.c. of the filtered solution, prepared as just stated, are placed into a test-tube, 1.5 cm. ($=\frac{5}{16}$ inch) wide, and mixed with 10 cc. of an aqueous cold saturated solution of picric acid. In the case of good extracts, a strong cloudiness appears at once, which gradually increases, and after 10 minutes has become so intense as to prevent the passage of daylight through the liquid. The adulterated sample (X) showed only a slight cloudiness with picric acid, nor did it after 10 minutes become so intense as to be impervious to light.

If it is desired to determine the quantity of the proteïn compounds in solution, 10 gms. of the extract are digested for half an hour at a gentle heat in 100 gms. of cold saturated aqueous solution of picric acid, and the whole set aside to allow the precipitate to deposit. The latter is collected in a tarred filter, washed and dried in the water bath. Its weight, divided by 2, is approximately equal to the quantity of the proteïdes.

4. Another portion of the filtered 10 per cent. solution is mixed with tincture of galls in excess, and well shaken. A copious whitish precipitate, remaining suspended in the liquid, and making it impervious to light, must make its appearance. Sample X gave only a slight cloudiness.

The same relationship which exists between pepsin and fibrin, or other animal proteïn-compounds, holds good between the diastase of extract of malt and vegetable starches. The latter, which form a main constituent of our vegetable diet, are converted by diastase into dextrin. Extract of malt, therefore, owing to its proteïdes and to diastase, is an excellent adjunct in the nutrition of infants.

Various other remedies have been combined with the extract of malt, to modify its action, or it is used as a pleasant disguise for disagreeable medicines. But since those agents which are capable of arresting or preventing fermentation would exert the same influence upon the diastase, and consequently would prevent the latter from acting upon starch, they should not be given in combination with malt extract, or at least only in very small quantities. Tannic acid, salts of quinine, salts of iron (ferric) with organic acids, and potassium iodide should be given in comparatively large quantities of the extract. Hager mentions the following compounds or preparations as in use in Germany:*

Extractum malti chininatum (or *quinatum*), *Malt extract with quinia*, was formerly prepared by adding 1 part of quinia sulphate to 250 parts of the extract; but the bitterness of the mixture

* In the course of the paper, this sample is distinguished by X.

* A number of preparations, besides those enumerated above, are in use in this country. See the remarks on p. 250 (Trœmmer), and the notices on p. 117 (Lœflund's, sold by A. Dung, jr.), and on p. 157 (F. Toussaint's).

caused it to be frequently rejected by children. At present the usual method is to add 1 part of quinia tannate to 100 parts of the extract. A trial with a perfectly neutral extract, prepared by J. D. Riedel, yielded a solution, which had not deposited any sediment after 8 days, and which exerted but a very slightly diminished action upon starch. Hager proposed to call this *Extractum malti tannochinatum.*

Extractum malti ferratum, Ferrated malt extract. A formula for this preparation is given by the *German Pharmacopœia.* It is best prepared by dissolving 2 parts of soluble ferric pyrophosphate in five parts of pure glycerine, and adding it to 93 parts of the extract. The taste of the resulting product is, however, slightly modified, and Hager recommends to use saccharate of iron 3 parts, glycerine 7 parts, and extract 90 parts.—This would be *Extractum malti saccharoferratum.*

Extractum malti iodatum, Iodized malt extract, is a solution of 1 part of potassium iodide in 10,000 parts [!rather dilute, Ed. N. R.] of extract.

Extractum malti pepsinatum, Malt extract with pepsin, is said to be more nutritious than the simple extract, and to be especially valuable in dyspeptic complaints. For this purpose a saccharated pepsin of 50 per cent. is recommended. 2 parts of this are rubbed with 5 parts of glycerine, and added to 93 parts of the extract. It is best to prepare this mixture only when wanted.

Extractum malti lupulinatum, Extract of malt with hops is a preparation made by J. D. Riedel, of Berlin. Although originally intended to be added to weak malt liquors or beers for the purpose of giving "body," it may be used medicinally. It has an agreeable aromatic taste, and is probably a solution of alcoholic extract of hops in extract of malt.—From *Pharm. Centralb.*, 1876, Nos. 23 and 24.

Peptone.

THE term "Peptone"* is used to denote those albumin-, or protein-bodies, which have been altered by the gastric juice, or in other words, the result of the action of pepsin upon fibrin or albumin. Peptones, introduced into the digestive organs, are directly absorbed into the blood, without having to undergo previous digestion, and are converted into albumin-bodies. As there are various diseases in which the secretion of normal gastric juice is more or less diminished or entirely suppressed—preventing, therefore, the assimilation of the protein compounds—the nutrition of the system may still be accomplished by introducing peptones into the digestive canal. The importance of this mode of administering nourishment in typhous and gastric diseases is fully recognized by physicians.

The German peptone is sold in round tin cans weighing 340 gm. (12 ozs. avoird.), and containing 250 gm. (9 ozs. avoird.) of material. Dr. Hermann Hager suggests the following method of examining it: 10 vol. of the peptone are slightly warmed, mixed in a large test-tube with 60 vol. of a concentrated solution of sodium chloride, and the mixture set aside. After the lapse of 30 minutes the peptone has collected at the bottom of the liquid, and occupies 8 to 9 volumes, after 30 minutes more 7 to 8 volumes, and after 12 hours not less than 3.3 volumes. Peptone, in a thin layer, is a clear liquid of the consistence of thin syrup, has a faintly bitter taste, somewhat resembling that of extract of beef or extract of mushrooms. A peptone-chocolate is also manufactured; this is of dark-brown color, has the consistence of a soft extract, and is sold in the same kind of tin boxes as the peptone itself.

Hager quotes the following extract from a report of Dr. H. Sanders in Amsterdam (who is also a manufacturer of peptone): It is well known that the albuminoid substances are the most important nourishing agents of the animal body. From them the muscles and nerves draw the necessary material for their constant reconstruction during the process of life. But before these albuminoids can become of use to the body, they must be digested; and this is done by being converted into peptone in the stomach and intestinal canal; as peptone, it is taken up by the blood, and there reconverted to albumin. As soon as any peptone has been formed, it is very rapidly absorbed. Whenever digestion is defective, or the gastric juice is of abnormal character, it is readily understood that the conversion of albumin or fibrin into peptone, and hence nutrition in general, must become impaired.

This defect may be removed by introducing ready-made peptone, which is rapidly and completely absorbed by the body, and which requires no further digestion. For this reason, it is just as effective if administered by the rectum, as if introduced into the stomach, and in many cases the former way is alone practicable.

The only disagreeable point about peptone is its taste; and if given by the mouth, this may require correction. In the case of nursing infants, it is sufficient to add it to the milk, about one to two tablespoonfuls to the quart. By beginning with small quantities, say one teaspoonful, they become easily accustomed to it. Adults may take it in milk, or diluted with water, or beef-tea. Or it may be mixed with equal parts of sherry, madeira, or some other generous wine. The most agreeable mode of administration, however, is the following:

Peptone-chocolate: 250 gm. (9 ozs. avoird.) of peptone are gently heated, and 200 gm. (7 ozs.) of white sugar dissolved in it; to the warm solution are added, under constant stirring, 100 to 125 gm. (3½ to 4½ oz.) of pure pulverized chocolate (free from oil), until there is produced a homogeneous syrupy mass, which may be flavored with vanilla, essence of orange or of lemons. On cooling, this mixture may be kept for a long time without spoiling, and a portion may be dissolved in hot

* Πεπτός, όν, digested, digestible, from πέσσω or πέπτω, to ripen, to digest.

water or milk. When administering it per rectum, it should be diluted with four to six parts of warm water.—*Pharm. Centralb.*, 1876, 203.

On the Bichromate of Potassium and Molybdic Acid Tests for Alcohol.

MR. F. C. HEWETT calls attention to the fallacy of Anstie's bichromate of potassium test for the presence of alcohol in urine, unless the latter has first been distilled; the fallacy consisting in the reduction into the green oxide, not by alcohol singly, but by some agent present in the urine of persons who were total abstainers from alcohol. If the test be applied to the distillate, in the case of alcohol having been taken in sufficient quantity to permit of its excretion in an unchanged form, the test will hold good, but not otherwise. The same objection exists to the molybdic acid test, proposed at the Irish Royal Society Meeting, during the week ending May 27th, by Dr. Davy. When applied to the urine of persons, abstainers or otherwise, a purple coloration was produced, and the intensity of the coloration appeared to bear no relation to the fact of indulgence, but was most intense in the urine of the greater specific gravity in either case; but the urine of those who had recently partaken of alcohol could be distinguished by the diagnostic reaction on the addition of the test to the distillate. Alcohol is the only substance present in the distillate that gave the reaction. Acetic acid does not give it, apart from the detection of alcohol in urine. Molybdic acid is not diagnostic of the presence of alcohol, as many substances—sulphurous acid for instance—will reduce it and give the purple color. The test fluid is made by dissolving one part by weight of molybdic acid in two parts of strong sulphuric acid, by the aid of heat, a drop of which, added to a solution containing alcohol, instantly detects it by producing a blue coloration.—*British Medical Journal.*

Test for Ascertaining the Presence of Blood in Liquids or in Cloth.

FOR physicians and clinical instructors the following method of discovering the presence of blood may be useful, especially in the examination of urine: it combines simplicity with absolute certainty. Mix in a test-tube two cubic centimetres of tincture of guaiac with an equal volume of oil of turpentine, and then add a few drops of the urine which is to be examined. If it contains any blood, even in minutest quantity, the whole mixture at once shows a more or less intensely blue color, sometimes a deep indigo, while this coloration is produced neither by normal urine nor by urine containing albumen or pus. If you wish to ascertain whether stains in linen, wood, etc., contain blood, you proceed in this way: Dissolve five grammes of guaiac in 100 cubic centimetres of absolute alcohol, and filter the solution; then mix five cubic centimetres of this solution with the same volume of rectified oil of turpentine, and put into this mixture the small piece of linen, wood, etc., the suspicious stains of which have been previously treated with warm diluted acetic acid. The presence of blood will at once show itself by a blue color.

New Formation of Salicylous Acid.

K. REIMER and Ferd. Tiemann have found that by allowing fifteen parts of chloroform to flow gradually, and under constant shaking into a solution (at 50°—60° C.) of ten parts of phenol, and twenty parts sodium hydrate in thirty to thirty-five parts of water, an immediate reaction takes place. The liquid, which has a faint yellow color in the beginning, turns momentarily bluish or reddish violet, and finally becomes permanently dark red. The temperature rises considerably, and it is necessary to provide the flask, in which the operation is carried on, with a reflux-condenser, to prevent the loss of any chloroform which may not at once take part in the reaction. The liquid is now boiled for half an hour, the small quantity of undecomposed chloroform distilled off, and hydrochloric or dilute sulphuric acid is added to strong acid reaction, whereby a thick red oil, of the distinct odor of salicyl-aldehyde, is precipitated. On now causing a current of steam to pass through the liquid, while boiling, salicylous acid and undecomposed phenol distil over, which may be dissolved in ether, and separated by a solution of sodium hydrosulphite (sodium bisulphite), while a faintly yellow liquid, and a deep red solid, congealing to a brittle resin, remain in the flask. The latter are separated by filtering the still hot liquid through a wetted filter. This resin is probably identical with, or related to, rosolic acid.—*Ber. d. d. chem. Ges.*, 1876, 824.

Cod-Liver Oil and Ferrous Iodide.

THE following formula for this preparation has been published in the *Nieuw Tijdschrift voor de Pharmacie in Nederland*, by a commission appointed by the Netherlands Pharmaceutical Society, to examine secret remedies and specialties:

Iodine	1 part.
Pulverized iron	1 "
Pale cod-liver oil	80 parts.

Triturate the pulverized iron in a mortar with the iodine and one-fourth of the oil, and heat the mixture in a water-bath, with constant stirring, until the brown color of the iodine has entirely disappeared and given place to a deep purple color, showing that the ferrous iodide has been formed and dissolved. Then add the remainder of the oil, mix carefully, and after standing decant into dry bottles, which are to be completely filled, closed immediately and kept sheltered from the light.

This oil is of a purple color, and differs in taste but little from the ordinary medicinal cod-liver

oil. Exposed to the light it changes after a few days to a red-brown color. Although the taste is but little altered, it is important to prevent this change of color, which always indicates a liberation of iodine. In well stopped bottles the oil remains unaltered, but it is as well not to prepare too much in advance. The taste and color furnish good criteria for its condition.—*Pharm. J. & Trans.*, July, 1876, p. 28.

Note on Persian Opium.

MR. BARNARD PROCTOR, of Newcastle, England, draws attention to some Persian opium, which had been offered at about one-third the price of good samples of the same drug.

Anticipating that it would be found dear at any price, he had the curiosity to obtain a small portion, and submitted it to analysis. The result proved the presence of only 0.25 per cent. of morphia.—*Pharm. J. & Trans.*, June, 1876, p. 1024.

Fraudulent Admixture to Rubber.

SOME rubber-goods of the market, such as tubing, sheet, rings, etc., have been ascertained, lately, to contain as much as 60 per cent. of ash. Pure rubber does not leave more than 2.5 to 3 per cent. Such goods contain an admixture of barium sulphate, and, although they are very cheap, they are not durable. In a few weeks they become hard, covered with cracks, and lose all elasticity; it is, therefore, advisable to ascertain the amount of ash before largely investing in such rubber-goods. This complaint comes from Europe, and we are not, at present, able to say whether it is applicable to American goods.

RECENT PAPERS.

Répert. de Pharm. Nos 11 and 12.—A. CATILLON: "On the internal Administration of Glycerine with Cinchona and Salts of Iron." [In the course of the paper the author remarks that by replacing the water in syrupus ferri iodidi or in other iron-preparations by glycerine, no reaction takes place on combining it with preparations of cinchona, and probably other substances containing tannic acid.]—A. CASSON: "On a Method of administering Salicylic Acid." [The author proposes to make a solution of 2 gm. of salicylic acid in 120 gm. of water, to which 2.5 to 3 gm. of ammonium citrate have been added. Such a solution is however much too dilute for practical purposes.]—JACQUEMIN: "On the Employment of Ferrous Pyrogallate as a Reagent for Bicarbonates in Waters." [Glénard has adopted a special name, *hydrocalimetry*, for the volumetric determination of bicarbonates. The main feature of the method is titration by a standard acid in presence of litmus, with repeated warming to expel carbonic acid, which colors the litmus red, although the liquid might still be alkaline. Jacquemin now proposes to use, instead of litmus, a solution of ferrous pyrogallate, which imparts a violet color to the solution. The preparation of this reagent will be given in our next number.]—F. JEAN: "Titration of Tannin." [The author employs a solution of 4 gms. of iodine in 1,000 cc. of water containing some potassium iodide. 10.5 cc. of this reagent correspond to 0.01 gm. of tannin.]—J. B. SCHNETZLER: "Action of Carbon Disulphide upon Insects which infest Herbaria." [The various insects, which attack dried plants, belong mostly to the class of Coleoptera, and are Anobium pertinax, A. paniceum, Ptinus fur, Dernester pellio, Psocus pulsatorius, etc. They are best destroyed by placing into a tight box as many of the books or covers containing the specimens as it will hold, with the open side upwards, and pouring rapidly over the edge and between the leaves or sheets a quantity of CS_2, about 4 fl. oz. for every 200 plants. The insects as well as the larvæ are thereby destroyed.]—BERGERON and J. CLOUET: "On the absolute Innocuousness of *pure* Fuchsine as a coloring Agent." [Certain coloring agents have for some time been officially approved in France, as logwood for curaçao, soluble indigo-blue and saffron for absinthe, and soluble indigo-blue for bluish liquors. The authors have examined the action of fuchsine, and find it to be absolutely harmless, provided it has been prepared without the intervention of any poisonous metallic salts.]—MOURRUT: "Bromhydrate of Conia" (see Sept.).—TANRET has discovered a new alkaloid in the leaves of the walnut, which he names *Juglandine*. Dried walnut-leaves are exhausted with alcohol, the liquid is precipitated with ammoniacal acetate of lead solution, acidified, and the alcohol distilled off. After adding ammonia to the residue, it is shaken with chloroform, which extracts an alkaloid, crystallizing in long needles, turning black, and undergoing rapid change in the air.

Buchner's Neues Rep. *May.*—Jos. MOELLER: "Contributions to the Pharmacognosy of Storax." [The author arrives at the following results: Liquid Storax is derived solely from *Liquidambar orientalis*, Müller; all other varieties become hard on exposure to air. The European market is almost exclusively supplied with the liquid variety, only France imports a small quantity of American storax, obtained from *Liquidambar styraciflua*, L., while the Asiatic sorts are mostly consumed where they are obtained.]—OTTO BILLINGER: "Historical Notes on Opium" (see p. 229).

Archiv. d. Pharm. *June.*—F. A. FLÜCKIGER: "On Oil of Orris" (see p. 233).—O. WACHSMUTH: "On the Strength of Water of Ammonia." [The author was led, by experiments on the best manner of managing ice machines, to investigate the specific gravities and percentages of stronger and weaker water of ammonia. The most concentrated solution, which could be produced at 0° C. had a spec. grav. of 0.866, and contained 47.55 per cent. ammoniacal gas. In this case 100 cc. of water had been expanded to 203 cc., or 1 gramme water had absorbed 1193 cc. of ammoniacal gas. At 12° C. 1 kilo. of the solution has a spec. gr. of 0.870 and contains 384.4 gm. of ammonia, or 1 litre contains 334.5 gm.—1 kilo. of the spec. grav. 0.900 contains 277.3 gm. ammonia, or 1 litre contains 249.5 gm. 1 kilo. of the spec. gr. 0.990 contains 21 gm. ammonia, or 1 litre contains 20.7 gm.

Ber. d. deutsch. chem. Ges. No. 10.—O. HESSE: "On Cusconin." [The author received a sample of cusco-bark, which had been asserted to contain without doubt *aricin* (see above p. 172), and which agreed in its appearance with that described by Leverköhn, who obtained from it an alkaloid "cusconine." Hesse now finds that the bark does contain the latter body, which is distinguished by being amorphous, and yields with sulphuric acid a tremulous jelly. Its solution does not react alkaline.]—H. FISCHER: "Water-jet-pumps for producing a Vacuum." [In place of the Bunsen filter-pump, the author has constructed a serviceable water-pump with manometer, of such a size that it may be conveniently placed at the work-table of each student. It consumes but little water, and is sold by Dreyer, Rosenkranz & Droup, in Hanover, for 10 M. (3⅓ Thaler) without, and for 20 M. (6⅔ Thaler) with manometer.]—A. NAUMANN: "On the Effect of Heat upon Chloral Hydrate." [The author finds that the vapor of chloral hydrate at a temperature of 78° C. consists of two completely dissociated molecules, and that it cannot be con-

verted into vapor at any temperature without decomposition, although afterwards being reformed by cooling.]—K. REIMER and FERD. TIEMANN: "On the Action of Chloroform upon alkaline Phenolates" (see "Salicylous Acid," p. 237).—H. SCHIFF: "Carbon Disulphide as a Preserving Agent." [The addition of a small quantity of carbon disulphide (CS_2), to substances liable to undergo putrefaction, completely preserves them. Dissected frogs and some unmutilated lizards had been placed into glass jars with a little CS_2, seven years ago, and are fresh and well-preserved to-day. The same is the case with the intestines of hens, some beef, and birds.]—E. BUSSE: "The constituents of Balsam of Tolu (see Sept.). No. 11.—H. VOHL: "On the Detection of Sulphur in Organic Compounds" (see Sept.).

Pharm. Zeit. f. Russl.—C. ARNOLDI: "Syrupus Amygdalarum, and S. Althaeae siccatus." [Dr. Enders having proposed some years ago to prepare syrup of almonds in a dry form, the author confirms the utility of the proposal. Applied to the formula for syrupus amygdali of the U. S. Ph., it would only be necessary to evaporate the finished syrup to dryness, to weigh the residue, and to ascertain the proportion thereof necessary for a given bulk of syrup. On redissolving the powder, it would, however, be necessary to add oil of bitter almonds, which has been lost by heat; and this might be done by using as solvent orange-flower water containing four minims of ol. amygdalæ amaræ to the pint.]—E. RENNARD: "On the Separation of Alkaloids." [The author points out some important conditions, which render the subsequent detection of alkaloids easier. He prefers to employ, in the case of medico-legal assays of animal organs, alcohol of 90 to 94 per cent., acidified with a little dilute sulphuric acid, and recommends water as a solvent only in presence of much fat. After digestion, the alcohol is carefully poured off into a beaker, and the process repeated. The liquid is filtered *only after being completely cooled off*, the alcohol then distilled off, and (after addition of water is necessary) the residuary liquid filtered *when cold.* In presence of mucous or saccharine substances, he finds that the addition of ¼ or ½ vol. of ether to the alcohol causes these bodies to be completely left behind, and a clear liquid is obtained. On treating objects containing much water, it is better to evaporate the liquid after distilling off the alcohol, on the water-bath to dryness, and to again extract with alcohol. In this way a small bulk of a clear aqueous solution is obtained, in which the alkaloids may be detected with ease. The main condition is, *not to filter until the liquids have become completely cold.*]—A. PELTZ: "On a new variety of Liquorice occurring in the Market" (see Sept.)—A. POEHL: "The Application of Optics to Medico-legal Examinations." [The author has investigated the absorption-spectra of a great number of alkaloids and proximate principles. In each case the diameter of the cell containing the liquid was 1 to 1½ centimetres, and the examinations were made in bright daylight under various conditions of concentration. The results occupy too much space to be quoted here, and those interested are referred to the original (No. 12, June 15, p. 353 sqq).]

Am. Journ. Pharm. July.—E. C. H. HILDEBRAND: "On rapid Filtration." [Description of an apparatus consisting of filtering tube, a vacuum-regulator and aspirator.]—WILL. S. THOMPSON: "Solution of Hydro-bromate of Quinia for Hypodermic Injection." [Quinia hydrate is dissolved in HBr, and the dried salt dissolved in water, in the proportion of twelve grains for every fluid drachm.]—J. U. LLOYD: "Note on Spirits of Nitrous Ether." [Denouncing its adulteration with water, although often of the proper strength in ether, and stating that in presence of water it is more apt to decompose than in presence of alcohol alone.]—G. J. MITSCH: "Analysis of Face Lotions." [The author analysed *Hagan's Magnolia Balm*, a bottle of which was found to contain 3½ fl. oz. of liquid, containing 2 drachms of glycerine and 262 grs. of zinc carbonate, together with a trace of carmine, and flavored with lavender and bergamot. *Laird's Bloom of Youth* was also examined, a bottle of which held 2½ fl. oz. of liquid, containing ½ drachm of glycerine, and 212 grs. of insoluble powder; this latter was found to consist of 31.204 grs. of bismuth oxychloride, 129.792 grs. zinc carbonate, and 50.004 grs. calcium carbonate. A trace of carmine and the flavor of lemon and bergamot were also present.]

Journ. de Pharm. et de Chim.—M. C. MÉHU: "Preparation of crystallized Mercury Sulphide in the wet Way." [If one part of black or red mercury sulphide be dissolved, together with two parts of crystallized sodium monosulphide, in two parts of solution of soda (spec. gr. 1.33), a solution of sodium-mercury sulphide is obtained, which is easily filtered, and has an orange red color. On allowing the solution to stand, loosely covered, the gradual absorption of the carbonic acid of the air causes the slow discharge of hydrogen sulphide, and the formation, first of crystals of sodium carbonate mixed with about 5 % of mercury sulphide, and afterwards of red or reddish brown crystals of the latter salt alone. The slower the process, the finer are the crystals.]

Zeitsch. d. Oest. Apoth. Ver. No. 17–19.—J. J. VON RENESSE: "On the ethereal Oil of the Fruits of Pastinaca sativa, L." [This was ascertained to be octylic butyrate].—X. LANDERER: "Oriental popular Remedies." [*Herpes circinatus* or *circularis* often causes a falling out of the hair and beard. The remedy which is used in such cases in the East is asserted to be an infallible antiherpetic: it consists of gunpowder rubbed to a magma with the juice of fresh garlic.—Although there is no specific known against *epilepsy*, there is still a popular remedy in use among oriental nations, which has acquired great reputation. It is the powder of the slightly roasted root of helleborus orientalis, L., administered for some time in doses of a teaspoonful.]—TH. PECKOLT: "Contributions from the Materia Medica of Brazil" (see the article "Sicopirin" Sept.).—POLACCI prepares chemically pure caustic potassa by heating potassium nitrate with iron filings in an iron crucible. The reaction is: $6KNO_3 + 10F = 3K_2O + 5Fe_2O_3 + 6N$.

Pharm. Centralb., No. 23.—HAGER. "Examination of Extract of Malt," and No. 24, "Malt Extract Compositions" (see p. 235).—HAGER. "Beef-Peptone" (see p. 236).—FRESENIUS and LUCK have analysed the red phosphorus of the market, and have found it to consist of 92.630 red phosphorus, 0.560 yellow phosphorus, 1.308 phosphorous acid, 0.880 phosphoric acid, and 4.622 water and other impurities.

Pharm. Journ. and Trans., June.—W. GILMOUR. "The Spectroscope Applied to the Detection of Adulteration of fixed Oils." [The author describes the spectra of a number of fixed oils, which he divides into band-giving and non-band-giving. He mentions having received a sample of lard oil, which the spectroscope revealed to have been adulterated with rape oil. Castor, almond and cod-liver oils gave no bands.]—DRAGENDORFF. "Ergot of Rye," (see p. 208 of the preceding number).—BALMANNO SQUIRE. "On an Improved Substitute for the Unguentum Plumbi Subacetatis Compositum, B. Ph. [In place of the officinal Liquor Plumbi Subacetatis the author some time ago proposed a "Glycerole of Subacetate of Lead," formulæ for which will be found in our June and July numbers; he now recommends to use this Glycerole in the preparation of the above-named ointment, at the same time substituting "Vaseline" for the white wax and almond oil of the Pharmacopœia. It is well known that the ointment deteriorates rapidly by keeping, and the substitution of vaseline would prevent this result. The only objection which can and must be made to this substitution is the fact that vaseline is a proprietary article, and not capable of being manufactured by any apothecary. Although its use has become quite universal, and deservedly we think, yet as long as it is protected by letters patent it should not be received into the *official* list of the Pharmacopœia. It might be advisable, however, to introduce a mixture of paraffin and paraffin oils in such proportions as to amount to the same thing.]—W. DYMOCK. "Notes on Indian Drugs." [*Diospyri Fructus*, Bombay name *Timbooree*. The unripe fruit is intensely

astringent; when ripe it becomes mellow and sweet without a trace of astringency.*]—*Entada Pusaetha*, local name *Gardul*, name of seeds *Pilpapra;* reputed to be emetic.—*Rhus succedanea;* the galls found upon this tree are called in the native trade *Kakrasinghee*, are of an average length of 1¼ inches, 1 inch broad, and ¼ inch thick.—*Artemisia*, bazaar name *Kirmanee*. This Indian wormseed appears to be identical with the European.]—F. A. FLÜCKIGER. "Contributions towards the History of some Drugs." [*Flückiger and Hanbury's Pharmacographia*, which appeared last year, marks an important epoch in our knowledge of the history of officinal drugs. The authors reinvestigated the whole field of British and Indian Materia Medica, and not content with the statements of other writers of recent times on the various subjects, endeavored in all cases to examine the original sources and documents themselves, collected an immense amount of entirely new information by the aid of co-laborers in all parts of the globe, replaced erroneous views and false, hackneyed statements by reliable facts; in short, have produced a work which is a *monumentum ære perennius*. After the lamented death of Hanbury, Prof. Flückiger has been left alone to continue his researches, and he contributes in the above-named paper some addenda and corrections to the *Pharmacographia*. See p. 228.)—B. PROCTOR. "Note on Persian Opium" (see p. 238).—EDITORIAL ON THE CHEMISTRY OF JABORANDI. [Giving the results of Mr. Kingzett's investigations, who obtained an alkaloid from Jaborandi, which did not yield a crystallizable salt with HCl, but was precipitated by phospho-molybdic acid. Formula: $C_{22}H_{34}N_4O_4, 4H_2O$].

July.—B. H. PAUL. "A source of damage to Linen, etc., marked with Ink containing Silver." [The author having noticed that those portions of linen which had been marked with indelible ink soon afterwards appeared to be eaten away, and to entirely drop out, was led by experiments to conclude that this was owing to the action of chloride of lime, used in the laundry, upon the silver oxide remaining in the tissue, free oxygen, probably in the form of ozone, being developed. He explains the reaction thus: $Ag_2O + CaCl_2O_2 = 2AgCl + CaO + O_2$]. — W. DYMOCK. "Notes on Indian Drugs." [*Embelia Ribes*, local name *Waiwarung;* the fruit is used as a tænicide. *Adansonia digitata*, local name *Gowik Chentz* or *Churee Chentz;* the bark is a febrifuge. *Salmalia Malabarica*, local name *Saur*. The astringent exudation found upon this tree is called *Muchurrus* or *Supari cha phool*, and may be used as a substitute for tannin. *Odina Wodier*, local name *Shimptee* or *Mooi*. The gum, called *Shimptee* or *Mooi cha goud*, probably has no medicinal action.]—J. C. THRESH. "Capsaicine the active Principle of Capsicum Fruits" (see Sept).—H. WM. JONES. "Notes on Cassava Starch in Arrowroot" [reporting that much arrowroot is in the English market adulterated with cassava-starch, or Brazilian arrowroot (amylum mandiocæ), from which tapioca is made].

Soap-Root.—A large commerce is carried on from California in a fibrous substance known as soap-root. It is obtained from a lily-like plant, a species of Phalangium, *Chlorogalum pomeridianum*, Kunth, which is met with about the mountains, and attains a height of eight feet. The heavy bulb is covered with many coatings, consisting of fibres, which are used for cushions, mattresses, etc. Large contracts are entered into for the supply of this material on a very extensive scale. The inner part of the bulb serves as a substitute for soap, and it might be tried whether it can be utilized for technological purposes like the root of *Saponaria*.

* Mr. Dymock mentions that the diameter of the largest fruits is about 1¾ inches. In Japan, where the persimmon (Diospyros Kaki) grows to the greatest perfection, one of us has met frequently specimens three inches in diameter, of a most luscious and agreeable taste. The Japanese dry the fruit and put them up in boxes, like figs. The same is the case in China. Ch. R.

THERAPEUTICS.

A Contribution to the Investigations of the Therapeutic Action of Hyoscyamine.

MR. ROBERT LAWSON, M.B. (Edin.), of West Riding Lunatic Assylum, has a paper on the above subject in *The Practitioner* of July. Lack of space alone prevents us giving the details of the cases, which are very interesting, but his general remarks are as follows: "In the fifth volume of the *West Riding Lunatic Asylum Medical Reports* I published a series of observations on the physiological actions of the active principle of hyoscyamus. The effect on man of the administration of sufficient quantities of the drug was shown to be the production of a subdued form of mania, accompanied by almost complete paralysis of the voluntary muscles, and ending in quiet and refreshing sleep. The consideration of the character of the phenomena produced lead to the hypothesis, that, therapeutically, hyoscyamine might be useful in substituting for the extreme forms of excitement which accompany or result from many brain diseases, a quieter form of mania, which, on disappearing, in its turn might leave the patient in a state of quiescence. I have now had frequent opportunities of acting upon this hypothesis, and am confident that the record of cases, which I propose at present to submit, will afford strong evidence in its favor. At present I shall confine myself to the statement of the effect produced by the drug in the treatment of recurrent, acute, and subacute mania, monomania of suspicion, and the excitement of senile dementia, setting aside, till a future period, the results of observations on the use of hyoscyamine in the epileptic status, the excitement of general paralysis, and other forms of cerebral disease.

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"One thing must be observed as characteristic of the use of hyoscyamine, that is, the potency and permanency of the action of individual doses. In these respects I do not think it is equalled by any other drug. In about fifteen minutes the most violent and excited patient can be thrown into a comparatively deep sleep by about one grain of the amorphous alkaloid, and on awakening from this slumber almost invariably frees himself from the delusions and hallucinations which have bewildered him; and I can adduce numerous instances in which this recovery, rapid as it has been in its accession, has also been thorough and enduring.

"There is one class of cases of mania in which hyoscyamine is particularly useful. In the refractory wards of an asylum outbursts of excitement are constantly manifested, which present more of the features of voluntary abandonment to angry passions than of pure insanity. Such patients are very aggressive, very loud in their denunciations,

and very destructive of clothes and furniture. To such a patient a grain dose of hyoscyamine is a very ready and serviceable means of treatment. The violence and the alarming manifestations of muscular force which precede the administration of the medicine stand in very strong contrast with the helplessness, the absolute and conscious impotence which follow shortly on its exhibition. The vigorous rupture of rugs is succeeded by involuntary pickings of a superlatively feeble character; the mind directed from the stimulation of surrounding excitements, is fooled by delusions and hallucinations which the limbs are too weak to take action on, and a period of oblivious sleep is followed by a tendency not to waste energy to the annoyance of others, but to court the most absolute retirement and inaction. The sensations produced by the immediate action and after-effects of the drug are such as to lead the recalcitrant lunatic to exercise a certain amount of self-control in order to avoid the employment of what such patients speak of as 'the silly medicine.' Many circumstances render such cases the most suitable ones for the use of the drug. Such patients are usually in robust health, have been eating well, and are not likely to suffer much from a temporary derangement of digestion, and none feel more keenly the inconvenience of being reduced to a state of helplessness. With patients suffering from acute or furious mania, however, the case is different. These not unfrequently are, when admitted, reduced to the last degree by the prolongation of extreme excitement, the loss of sleep and the refusal of food. Their tongues and throats are generally dry, and the tube almost always requires to be resorted to for feeding purposes. Now in such cases, though hyoscyamine will produce a most certain and refreshing sleep, it will also by its physiological action increase the dryness of the throat, and thus both impede artificial feeding, and add to the constitutional disturbance which, even in a moist state of the throat, the passing of the tube is apt to induce. But I could adduce numerous instances in which the use of hyoscyamine in outbursts of maniacal excitement has been productive not only of great temporary benefit, but of highly satisfactory cures.

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"While mentioning the disadvantages associated with the administration of hyoscyamine, it is necessary to take note of the liability which patients only partially under the influence of the drug experience to the infliction of bruises. Before the physiological action of a full dose is completely established, and where it is passing off, the patient influenced by hallucinations of sight may rise, and while attempting to walk, is liable, by the existence of partial motor paralysis and hypermetropia, to the infliction of bruises by contact with hard substances. * * * * * * *

"In chronic monomania of suspicion I have had very satisfactory results from the use of hyoscyamine. A large number of such cases result from alcoholism; and the delusions of suspicion remain as the chronic manifestation of the attack of *mania a potu*, which is generally found to have existed as the first appearance of mental derangement. In such cases the almost irremediable state of subdued suspicion is varied by exacerbations excited by the most trifling causes, sustained by hallucinations of all the special senses and characterized by extreme danger to the person suspected by the patient. * * * * Being in addition well fed and compelled to take a fair amount of exercise, they are generally sufficiently robust to enable them to bear well the temporary inconvenience of the hyoscyamine treatment. * * * * * * *

"With reference to the treatment of the excitement of senile dementia by the active principle hyoscyamine, it is only necessary to say that the benefit which has long been acknowledged as obtainable in that disorder from hyoscyamus itself naturally suggested the idea that the active principle might be still more useful. Consequently the excitement of senile dementia was one of the first conditions in which I employed the drug. The disadvantages, however, to which I have already referred in speaking of the treatment of furious mania by large doses of hyoscyamine, apply equally to the use of the drug in senile excitement, and I have consequently found it advisable not to treat such cases with the active principle. I must say, however, that in instances which I have considered to be suitable for its administration, the arrest of the excitement has been very decided. In such cases I have given nutrient enemata from the commencement of the action of the drug, and for two or three of the following days. * *

"No medicine capable of producing narcotism operates so quickly and with so much certainty, and none has such a decided capability of leading the mind from absorption in delusions and hallucinations through a milder physiological form of mania to a state of complete and, under favorable conditions, permanent quiescence. Still it has been my aim not to shut my eyes to the disadvantages possessed by the drug. * * There is one form of disadvantage, however, which arises not from the nature but from the mode of administration of the drug. If timid persons, instead of giving a full dose, say one grain, compromise matters by giving half a grain, the effect is that cerebral excitement without complete motor paralysis is produced and remains persistent through the whole period of the operation of the medicine. Hallucinations tempt the patient to action; derangements of vision lead him to knock himself against projecting surfaces, and a new excitement is added to and not substituted for the excitement of mania. I refer to one grain of the amorphous alkaloid as a full dose, for though three grains have been taken with impunity, yet I never saw one grain fail in putting a speedy termination to the most violent excitement.

"In leaving, for the present, the consideration of the therapeutics of hyoscyamine, I earnestly recommend it as *facile princeps* in the treatment

of all cases of what may be called, for my present purpose, sthenic forms of mania, and especially in the aggressive outbursts of excitement which characterize life in a refractory ward, and in the treatment of chronic monomania of suspicion. I should also suggest its use in some forms of disease regarding which observations cannot readily be made in a lunatic asylum. For instance, the constitutional effect on mucous membrane and the special effect on the urinary system suggest that hyoscyamine may be of service in gonorrhœa, and I have myself seen benefit produced by its administration in spasmodic stricture of the urethra. The dryness of the skin produced during the physiological action of the medicine suggest that it might be useful in colliquative sweatings.

The following was the formula employed by Dr. Lawson:

℞ Hyoscyamine *.....gr. i.
Sp. Etheris.....℥viij.
Alcoholis.....℥xxiv.
Aq. font. ad.....℥i.
M. ut fiat haustus.

He has not had occasion to use the drug hypodermically, and is not sure that the pungency of a concentrated form of this solution would not render a new formula necessary for subcutaneous use.

According to the *Br. Med. Jour.*, Dr. Sidney Ringer is making observations upon the mydriatic properties of hyoscyamine. Of a solution of 1 gr. in 120 m., a half minim dropped into the eye, led to full dilatation of the pupil in a quarter of an hour. There was no reaction to light, and at the end of twenty-four hours the effect still continued.

On the Modern Neglect of Calomel in Certain Diseases.

In *The Practitioner*, of July, Dyce Duckworth, M.D., of St. Bartholomew's Hospital, remarks the present aversion to the employment of calomel in many cases in which it appears to him to be plainly demanded. "Nothing is more certain in the history of medical art than that mercury was too freely and too often employed at the beginning of this century; but it appears to me that the reaction has been too extreme, and thus the disuse of mercurials has become with many almost a principle in practice."

The so-called functional diseases which he particularly mentions as calling for the use of calomel are, first: cases of acute gastric catarrh, whether a result of excesses in food or drink, as an accompaniment of acute inflammations, exanthemata and rheumatic fever, or as found in children as a result of checked perspiration from improper exposure and insufficient clothing, in dentition, etc. He thinks that the hopes that podophyllin would take the place of mercury have proved unfounded, and believes that the purgative effects of calomel, either by itself or in combination with jalap, colocynth or scammony is unsurpassed. "Cases of acute gout and gouty dyspepsia, are eminently well treated by calomel at the outset; so, too, many of the recurring congestive troubles of chronic cardiac and pulmonary disease are amenable to the same medication, care being taken to withhold the drug in cases when there is manifest renal degeneration."

"I am satisfied that in many minor disorders of children nothing can take the place of calomel as a purgative, and much time is often lost by beginning with drugs that are accounted more simple. The only medicine that appears to me to approach calomel in value is castor-oil; but this is constantly a source of trouble from its disgusting character. I find that calomel is distinctly preferable to gray powder as a purgative, just as for other purposes strychnia is to milder preparations of nux vomica. Its action is smarter and more decided. It has also the great merits of being tasteless, and of exciting no nausea, and its bulk is small."

"In strumous children, or in healthy ones who suffer occasionally from gastric catarrh, with tenderness and some torpidity of the liver, no medicine is comparable to a purgative containing calomel. After its action a copious bilious stool or two are passed, the tongue is observed to become cleaner, the feverishness pertaining to this state subsides, and the child becomes brighter, and has restored appetite. A so-called simpler treatment with soda and citrate of potash will often fail to yield these results, and so, too, will repeated doses of rhubarb and senna."

In reference to proprietary pills, he says: "Let it be noted, in passing, that many of the popular so-called 'anti-bilious' pills notoriously contain mercury as an ingredient, notwithstanding impudent statements to the contrary on the pill-box labels."

"I would not be understood to urge a return to the old custom of large and frequent dosing with calomel. Nothing could be worse. All drugging is an evil; but when medicine is distinctly indicated, we should not fear to use active agents boldly, and so as to produce their effects.

"Many hard things have been said about the improper use of mercury, but instances are not far to seek in the practice of most experienced men, where aperient mercurial medicine has been taken almost nightly for years without it being possible in common honesty to say that any serious harm has thereby accrued to the individual."

Quinine as an Ecbolic.

J. Hancocke Wathen (*The Practitioner*) reports two cases in which quinine appeared to induce uterine contractions; the first was a case of pregnancy (between four and five months) in a patient suffering an attack of pleuro-pneumonia, the other was thought to be a case of fibroid tumor.

* Merck's.

The Use of Nitrite of Amyl.

DR. G. WINFIELD ZEIGLER reports in the *Medical Times*, of July 8, his experience in the administration of the nitrite of amyl, having given it by inhalation in at least fifty different cases, comprising not less than half that number of different forms of disease, and has found it to be of service in angina pectoris, in dyspnœa often attending phthisis immediately preceding death, hysterical convulsions, asthma, neuralgia, intermittent fever, and chorea.

"In angina pectoris it does not act very quickly, but it undoubtedly shortens the attack. In dyspnœa, due to the above-mentioned cause, I have found it to be very efficacious—often, I feel confident, tiding a patient through the night when it seemed inevitable that he must succumb.

"In hysteria it acts quickly, almost instantly, causing a general relaxation of the system, which, after twenty-five or thirty minims of spt. ammon. aromat. have been given, will leave the patient quite comfortable.

"I have employed it in but three cases of epilepsy. In two of them the results were good, and quickly produced; in the other one, which seemed to border somewhat on an apoplectic nature, the effect was not so satisfactory. However, the case was so peculiar in its nature that it could not fairly be called a test case.

"I have given it in quite a number of cases of cephalalgia of a nervous or neuralgic type, and do not think it ever failed to afford instant relief.

"In asthma it is peculiarly useful. During the month of December last I gave it in three cases, two of whom had been affected with the disease for several months, and the other for some years. All of them suffered just prior to admission with nightly paroxysms of asthma, which disturbed sleep and created general disturbance. Two of these patients left the hospital within four weeks after their admission, apparently cured.

"Six months later I saw both of them again, and learned that the disease had not returned. The other case remains under treatment at the present time in the hospital. He is a man about sixty-five years of age, very muscular, and abounding with adipose tissue. His lungs are very emphysematous, and frequently during the first part of his stay in the hospital he would have slight attacks of hæmoptysis attributable to asthmatic coughing. His pulse ranges from 92 to 109 beats per minute, and his respirations number from 24 to 28, in the standing posture. A very remarkable feature of this case is the constant muscular tremor which pervades his body. Dr. Henry, the present visiting physician to the hospital, and to whom I am under much obligation, tells me that he has known the above patient for more than a year, and that he never knew him to enjoy as good health, comparatively speaking, as he did during the past winter—and, to use the patient's own words, he 'never had a good night's rest since the disease got so bad, until he took this medicine.'

"At first he was given regularly at bed-time from ten to fifteen drops, but later he required it only once or twice a week, and now scarcely requires it at all. Dr. Henry also mentioned the case of a prominent medical gentleman of this city to me, who used to have annual attacks of asthma that were finally, when everything else had seemed to fail, cured by a very short course of treatment with the nitrite.

"In neuralgia its effects are as a general thing only palliative; sometimes it will arrest the attack.

"I have used it in but one case of intermittent fever, just as the cold stage had fairly set in, on a man thirty-nine years of age, who was laboring under a marked quotidian type of the disease. The chill, which at other times would last about half an hour, was instantaneously arrested and followed by a very mild stage of fever and perspiration.

"Before the amyl had been given in this case, the patient was for several weeks upon large doses of chinoidine and quinia, in their turn, without any appreciable effect. He remained in the house for two weeks after the administration of the amyl, but did not have a single return of the fever.

"In all the six cases of chorea in which I employed it, the results were most salutary, except in one, in which the treatment was interrupted.

"It acts, as a rule, when given, by alleviating, to a great extent, the convulsions, and very often causing the patient to fall into a calm sleep.

"At first, when I began the amyl treatment, I administered it in rather small doses, from gtt. iij. to v., but gradually I gave it more freely, until now I use it almost indiscriminately, when the proper cases present themselves.

"In one case of epilepsy, above referred to, a man sixty years of age inhaled nearly f. ʒ iv. within ten minutes. Dr. Bennet informs me that he has upon different occasions given amyl very freely, and unites with me in saying that it is not a treacherous remedy."

* * * * *

"There was an increase in the number of respirations of from four to eight, and in the number of pulse-beats of from sixteen to twenty-four per minute, while the temperature almost invariably rose one-half of a degree, and sometimes a little higher.

"A very interesting symptom, and, I believe, usually the first which makes its appearance, is a sharp, dry cough.

"Prof. H. C. Wood, in his excellent work on 'Therapeutics,' states that shortly after the congestive symptoms (if I may use this term) have come on, there is a sudden change from a flushed to a pallid countenance, but entertains the opinion, that this might only be a passive symptom, which could readily follow from a total evaporation of the first supply of the drug, and could be displaced by the original flush were an additional dose administered; I have observed this same phenomenon, and frequently, on the strength of Dr.

Wood's statement, endeavored to verify the same, but I cannot say I have met with a corresponding result, but, that frequently, when pushing the amyl, would, if anything, increase the severity of this symptom, at which time the breathing of the patient would become quite laborious, and the force of the heart's action be diminished."

In the same number of the *Medical Times* is a communication by Hamilton Osgood, M. D., on the use of this remedy in the cold stage of intermittent fever, as follows:

"Three or four weeks ago a case of intermittent fever was brought into the Centennial Hospital during my hours of service. The patient was nearly through the stage of chill. Since I first saw the effects of the nitrite of amyl, I have made use of it in any case in which there were spasmodic conditions, whether muscular or vaso-motor, local or general. Thus, in my hands it has proved successful in several cases of angina pectoris, asthma, colic, spasm of the diaphragm, etc. When, then, I was casting about in my mind for a remedy which would quickly relieve the chilly condition of my Exposition patient, and idly wondering as to how much difference there might at this moment be between the diameters of his peripheral and organic capillaries, it suddenly occurred to me that, since his peripheral capillaries were in a state of contraction (as in all cases of chill), it would be perfectly logical to expect that the vaso-motor spasm would be overcome by the nitrite of amyl. I administered the remedy by inhalation, using about six drops. The remnant of the chill at once disappeared. I did not, however, consider this a fair case, because the chill period was nearly over before I saw the patient.

"A few days later, a poor German was brought to the hospital, in the very acme of the cold stage; face cyanotic, teeth chattering, and he shaking himself to pieces generally. I at once administered the amyl. Within forty seconds the chill was gone, and the patient complained of too much warmth. Five minutes later, patient began to feel chilly. A few inhalations of the remedy again flushed the surface, and there was no subsequent return of the chill; but fever came on as usual.

"In a third case, the chill was more obstinate, or the remedy less effectual, for, although the chill momentarily and at once aborted, it returned several times, each recurring chill, however, being feebler than the preceding one, before I fairly conquered it, which I did by large doses (gtt. xx–xxx.). It may be that a heavy dose of the amyl (say f ʒ j.) given at the outset would abort a chill at once, and finally. At any rate, the more I see of the effects of this remedy, the less I fear it in large doses. As yet I have never administered so large a quantity as one drachm, excepting in a case of angina pectoris, which I mentioned, among others, in my paper in the number of the *American Journal of the Medical Sciences* for October, 1875. In this case the patient was a delicate lady; but she was not in the least disturbed by the large dose, and, I think, could have borne a larger.

"It is premature for me to set the proper value on the nitrite of amyl as a remedy in malarial fever. I have merely seen that in three cases it aborted the chill, having no especial effect upon the latter stages, except more or less to shorten them.

"I give my experience to the profession, hoping that physicians in malarial districts will test this remedy and let us know whether it proves successful. There is, at any rate, something gained, if we can only abort the chill."

Bromohydric Acid.

Dr. J. Milner Fothergill has been experimenting with bromohydric acid as a therapeutic agent, and writes to the *British Med. Jour.* of July 8, from which we take the following:

"The formula is as follows, for the production of the acid in quantities of two quarts. Dissolve ʒ x., ʒ vj., gr. xxviij. of bromide of potassium in four pints of water, then add ʒ xiij., ʒ j., gr. xxxvij. of tartaric acid. The bitartrate of potash is precipitated and the hydrobromic acid remains in a clear, bright, almost colorless fluid, possessing an acid taste and the ordinary acid properties, as well as the peculiar properties of bromide of potassium, as compared with any other salt of potash.

"The accuracy of this last statement may be challenged by some readers; I will, therefore, briefly relate the conclusions arrived at after a twelve months' experience of the drug. It certainly does prevent the occurrence of headache, after each dose of quinine, in those who before had to desist from taking quinine for that reason. It is, perhaps, not invariably successful, but its power is very marked. It also prevents the fulness felt in the head by some persons, especially those laboring under cerebral anæmia, after doses of iron. It is also useful after nervous conditions, and, with quinine, is excellent in those cases when there is much nervous exhaustion from excessive indulgence in tea or in alcohol—this having been tried in a case of nervous excitability and sleeplessness where there had been much resort to chloral hydrate.

"In forms of excited action of the heart, connected with general nervous excitability or nervous exhaustion, hydrobromic acid is most useful; given with quinine (of which it is a capital solvent) and digitalis, it gives better results than bromide of potassium and digitalis" * * "In all hysterical conditions connected with ovarian excitement, it seems to have all the properties of bromide of potassium. It is equally useful in the vomiting of pregnancy, and seems to exercise quite as powerful an influence over acts of reflex origin as does the bromide. It is especially adapted for the relief of menorrhagia associated with sexual excitement, and is even more effective here than the bromides themselves. It is also of use in whooping-cough, and combines con-

veniently with quinine, forming an effective measure in this troublesome affection; with spirit of chloroform and syrup of squill, it forms a most agreeable cough mixture of no mean potency. It is also of use in case of cough of reflex origin. When there is gastric irritability, it is the most useful of all acids, possessing the usual properties of acids generally and of the bromine as well.

"The dose of the acid, prepared as above, is one drachm as a full dose. Half a drachm is the dose I ordinarily employ. Bromohydric acid has the further advantage of not producing the troublesome eruption so often the result of doses of the bromide of potassium, at least so far as my experience has yet extended. There are many qualities about this acid to render it a useful member in our therapeutical armamentarium. Dr. Wade* states that it is useful in the treatment of fever. It would seem the acid *par excellence* when there is much cerebral excitement in pyretic affections; but of this I have no personal experience."

Treatment of Epilepsy by Sodic Bromide.

In the *British Med. Jour.* of July 1, W. Ainslie Hollis, M.D., refers to the criticism made by Prof. Binz, † of Bonn, to the statements made by Dr. Hollis, in 1872, regarding the value of sodic bromide in the treatment of nervous diseases. In the number of the journal referred to, Dr. Hollis reports eleven additional cases, selected from a considerable number of observations, in which the effect of treatment was to diminish the frequency of the attacks very markedly.

Treatment of Angina Pectoris.

The *London Medical Record* takes from the *Paris Medical* some remarks by Professor Sée, of Paris, on the treatment of angina pectoris. According to him, this affection is not a neurosis, but an ischæmia, combined with pain. The treatment should, therefore, be twofold. As the pain which, by its violence, can stop the breathing, can kill the patient in a few minutes, it is to that we must first address ourselves when called during an attack. To this end, morphia hypodermically is the best, and the administration of it in this way should be continued, at least twice in the twenty-four hours, until the attack has completely disappeared. The morphia not only acts by suppressing the pain, but it assists the circulation also, and thus directly addresses itself to the ischæmia, which stops the heart from receiving sufficient blood, causing it to lessen. Together with morphia injections, enemata of chloral should be given to the extent of two to three grammes.

While advising chloral, Professor Sée cautions against the use of chloroform, which ought not to be used, owing to its tendency to paralyze the heart. Nitrite of amyl has no action as a sedative, but its effect to produce dilatation of the vessels may render it useful. Belladonna produces no effect, and the use of anti-spasmodics in a disease of such severity is absurd. Acetate of ammonia has a certain value as an excitant of the circulation, and because it acts on respiration, but it is inferior in value to morphia. Although prejudice may sometimes render it desirable to use cupping, frictions, and heat, they are really of no service. During an attack the use of the bromides is inadmissible, because they produce contraction of the blood-vessels instead of dilating them; but, like digitalis, they may be valuable during the intervals as regulators of the circulation. Arsenic, however much vaunted, does no good. Hydrotherapy is highly dangerous, either a return of the attack or cerebral congestion being results to be feared from its employment.

* *Peninsular Jour. of Med.*, February, 1875.
† *Practitioner*, January, 1874.

Dr. Decaisne on Spirituous Liquors.

The *British Med. Jour.*, of July 15, publishes a letter from a Parisian correspondent, who says: "Dr. Decaisne, who has published some very important articles on the dangers of the use, or rather the abuse, of certain spirituous liquors considered to possess appetitive properties (I use the adjective in the French sense, which means appetite-exciting), known by the names of 'absinthe,' 'vermouth,' 'bitter,' etc., is now waging war against a liqueur called the 'Grande-Chartreuse,' and an aromatic liquor called 'Eau de Mélisse des Carmes,' which latter is used only medicinally, but is so frequently resorted to, particularly by hysterical ladies, that Dr. Decaisne has thought it proper to bring it to the notice of the Academy of Medicine, in order to warn both doctors and patients against its indiscriminate employment, as well as that of the above-named liquors. Dr. Decaisne considers these liquors as powerful stimulants; and that, from containing essential oils and alcohol in a concentrated form, they are more liable to produce alcoholism than the ordinary spirituous liquors in common use. The 'Vin de Quinquina' (cinchona wine) is another medicinal preparation much abused by the French, so much so, that it came to be sold at the public-houses like ordinary wine, until the police had to interfere, and put a stop to its being supplied by others than regular 'pharmaciens.' But the authorities might have gone a step further, and prevented the latter from dispensing the wine without a proper prescription. The vin de quinquina is much more commonly employed than is supposed, and constitutes one of the forms of voluntary or involuntary tippling resorted to in all classes of society, under the impression that they require the daily use of stimulants and tonics for their well-being; and the opinion is so general that most people make their own cinchona wine. According to the French pharmacopœia, the vin de quinquina is prepared with Bordeaux wine, and a certain proportion of alcohol. It often happens that, after a certain time, the consumers of this prepa-

ration, finding the wine not strong enough to their taste, gradually increase the quantity of pure alcohol, at the expense of the wine, until the mixture, instead of being a salutary wine, becomes a pernicious tincture, as large doses are continued to be taken even in the latter form. No wonder, then, that symptoms of alcoholism, and even delirium tremens, are not unfrequently met with in persons belonging to temperance societies, or who persistently deny that they are addicted to the use of spirituous liquors in any form.

Local Treatment of Burns.

In an article in No. 226 of the *Medical Times*, on "The Pathology of Burns and their Rational Treatment," by Bedford Brown, M.D., of Alexandria, Va., the writer, under the latter head, says:

"Of all local applications in the experience of the writer, iodoform, prepared with extract of conium, and spermaceti ointment, with a small portion of carbolic acid, appears to meet the several indications best.

"This agent acts as a certain and most effective sedative on the painful and irritable exposed surface, and at the same time as an antiseptic. It reduces irritation, inflammation, and suppuration when in excess, in a remarkable manner. It converts a most painful and irritable wound into one comparatively painless, with promptness.

"This remedy is also an excellent promotive of healthy action and of the healing process. I have experimented with iodoform ointment in these cases repeatedly, and always with the same pleasant result. The use of this preparation has another advantage: it renders the constant use of anodynes unnecessary. The following formula has been found the best:

℞ Iodoformi..... ʒ ij.
Unguent. cetacei..... ʒ i.
Ext. conii..... ... ʒ iss.
Acid. carbol.....gtt. x.
M.

"This ointment is spread twice daily on soft linen, and applied over the inflamed surface, and then enveloped in oiled silk. No other dressing is necessary. The only objection to the use of this remedy is its peculiar odor. In those cases of burns attended with great *dryness* of surface from destruction of vitality and want of exhalation, the wound, before being covered with the iodoform ointment, should be coated over with the common linimentum calcis. This affords a soft and moist dressing, which in no wise interferes with the action of the iodoform."

Bicarbonate of Soda in Suppression of Urine.

Mark Lemon, M. B., has used bicarbonate of soda in half teaspoonful doses thrice daily with excellent effect in renal cases attended with suppression of urine. In connection with warm bathing, he has found nothing so useful as it in the class of cases mentioned.

Citrate of Quinoidine.

From researches originally made by Buchner, and recently repeated by Haller, in the General Hospital at Vienna, citrate of quinoidine is as certain a cure for fever as the ordinary sulphate, which is ten times more expensive. [Does he not refer to the sulphate of quinine?] Haller gave the solution of one drachm of citrate of quinoidine in three ounces of water, with the addition of half an ounce of aquæ cinnamomi vinosa in the intermissions, at intervals of from two to three hours, in lieu of spoonful doses. Of forty-one cases of intermittent fever, forty were cured with the solution of quinoidine, and only one relapse occurred, which was again cured by persisting a little longer with the use of the citrate.—*The Practitioner*, from *Neues Rep. d. Pharm.*

ORIGINAL COMMUNICATIONS.

REMARKS ON THE PHARMACOPŒIA OF THE UNITED STATES.

BY DR. JOHN C. PETERS, OF NEW YORK.

It was peculiarly appropriate that the United States Pharmacopœia should be reviewed and criticised before the Medical Society of the County of New York; for it should be known of all men that the first steps for the formation of a National Pharmacopœia were taken by that society, in January, 1817, or no less than fifty-nine years ago.

At that time, Dr. Lyman Spalding submitted a plan to the Medical Society of the County of New York, for the establishment of a Pharmacopœia of the United States, with the aid and by the authority of all the State and County medical societies, all the medical colleges, and of all the recognized medical societies and associations in all sections of the Union; or by as many of them, at least, as could be induced to join in this necessary and patriotic work.

The plan suggested by Dr. Spalding was a very wise and comprehensive and unselfish one, viz.:

First: The United States were divided into four districts, viz., a Northern, Middle, Southern, and Western, with district headquarters at Boston, Philadelphia, Charleston, S. C. and Lexington, Kentucky.

This self-abnegation on the part of New York, rendered it very easy for Philadelphia to assume the most prominent part, owing somewhat to its more central position.

Second: Every State and County medical society, every medical school or faculty of medicine, and every recognized medical society in each and every one of these districts was invited to send delegates to a district convention, in order to form a Pharmacopœia adapted to the wants of the sick and the requirements of the physician in that section of the country.

Third: After three years of preliminary labor, each District Convention was directed to appoint delegates to meet in a general convention in the city of Washington, D. C., on January 1st, 1820, and submit to the same the drafts of their several Pharmacopœias, which were then to be consolidated into one great and authoritative national work.

In accordance with this plan, seventeen delegates to the Eastern District Convention, from the State Medical Societies of New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut, and from Brown University, and Yale College met in the city of Boston, in 1818 (?). The principal delegates were Drs. Torrey, Mussy, Batchelder, Thacher, Shattuck, Tally, Nathan Smith, and Heywood.

They organized under the direction of the distinguished Drs. John C. Warren, Jacob Bigelow, and Eli Ives, and adopted a draft for a Pharmacopœia, based upon that of the Massachusetts Medical Society, published in 1808.

The District Convention of the Middle States met in Philadelphia, with nearly thirty delegates from the States of New York, Pennsylvania, New Jersey, Maryland and the District of Columbia.

The delegation from the city of New York consisted of Drs. James W. MacNeven, John W. Francis, Valentine Mott, Lyman Spalding, Samuel L. Mitchell, Alexander H. Stevens, John Watts, David Hosack, J. R. B. Rogers, John Stearns, J. Romeyn Beck, and Wright Post. It submitted the outline of a Pharmacopœia, doubtless based on that of the New York Hospital, published in 1816.

The Pennsylvania delegation, under the leadership of Drs. Parrish, Hewson, Chapman, Atlee, Griffiths and others, presented another draft, and the collective delegates of the Middle District proceeded to form one Pharmacopœia out of those of New York and Pennsylvania, and accepted it as the contribution of the Middle District.

The Southern and Western districts, under the guidance of Drs. Barton, Dudley, Trescott, Moultrie and others, made many suggestions, but did not complete any distinct work.

After this preliminary work, which extended over three years, the General Convention met in January, 1820, in Washington, when over seventy representative men, from every section of the country, met in council, under the Presidency of the well-known Dr. Samuel Mitchell, of New York.

It will be seen that this convention contained as many great medical historical names, and as many great and good physicians, as ever assembled in so small a gathering, in this or any other country.

This formed the first great American Medical Association that had ever met together in the United States, and its name and memory should never be allowed to perish. It antedates the present American Medical Association by fully thirty years, and should not be swallowed up by it. It must be an easy task for the great State and County Medical Societies of the rest of the Union to claim the rights, which it seems to some that Philadelphia has taken from them. The facilities of travel are far greater now than they were in January, 1820, when seventy delegates met in Washington. Every State and every large city in the Union should be well represented at the next convention for the revision of the Pharmacopœia. State conventions should be held not later than 1878, and each State should send in its draft of a State Pharmacopœia, to be consolidated into the Sixth Decennial Revision of the United States Pharmacopœia, in 1880. The annual meetings of the State Medical Societies, in 1877, will form the most convenient time for the appointment of delegates to meet and report in 1878, '79, and '80. Thus, only, can we again get a truly National United States Pharmacopœia, adapted to the wants of the physician in every State in the Union.

Papers at the British Medical Association.—Of the sixty-eight papers to have been read at the meeting of the British Medical Association from the 1st to the 4th of August, according to the titles published in the official journal, seven only were of a therapeutical nature, viz.: "A Few Therapeutic Extracts from my own Practice," by John Broom, M.D.; "On the Use of the Lead Lotion in the Treatment of Wounds," by Jonathan Hutchinson, F.R.C.S. "The Medical Administration of Alcohol," by Norman S. Kerr, M.D.; "A Case of Puerperal Convulsions Treated Successfully with Hypodermic Injections of Ergotine," by Thomas Stainthorpe, M.D.; "A New Emetic Purge," by Thomas J. Ashburton, M.D.; "On the Advantages of Ether as an Anæsthetic over Chloroform," by Bernard Walker, F.R.C.S.; and "The Results of Modern Research in the Treatment of Phthisis," by J. Burney Yeo, M.D.

CORRESPONDENCE.

NEW YORK, 31 July, 1876.

MR. CASTLE, *Editor of* NEW REMEDIES: I would call to your attention that the obituary notice of Dr. Lewis Feuchtwanger in your last issue was original to this paper. Desire credit for it.

Faithfully yours,
FRANCIS HUMPHREYS.

We have no desire to steal our friend Humphreys' thunder. The obituary notice above referred to was sent us by one of our correspondents. It had no sign to indicate that it was original to "the Representative Drug, Paint, Oil and Chemical Trades Paper of the United States," and the fact that the latter is not among the journals with which we have the honor to exchange, has, perhaps, prevented our becoming so familiar with its literary style as to enable us to know its original matter at sight. Indeed, we doubt if we should have mentioned its source if we had known it, for we published it as a news item, and our practice is to credit our exchanges with only original scientific articles and translations; and this is done for the benefit of our readers, that they may be able to refer to the complete paper when the abstracts which we give them are not sufficient for their needs. Nevertheless we wish to do the fair thing by our contemporaries, and we promise our friend Humphreys that we shall in future credit him with *everything* which we take from his paper.

Poisoning by Coal-Oil.

I was recently called to see a little boy, five or six years of age, suffering from the effects of drinking coal-oil. How much he drank no one knew, and it was some four or five hours after when I first saw him. I found him in a state of stupor, system relaxed, no voluntary control of eyelids, suffering but little pain. He recovered without much treatment, although he was stupid for several days.

It is a common domestic remedy here among the poor classes, more particularly among the negroes, for many of their ailments. I would be glad to know something of its medicinal properties, if any; if it is poisonous, what is the antidote? etc.

I get the journal regularly, and am highly pleased with its contents. I have long felt the need of a good journal of the kind. J. N. T.

LYNCHBURGH, TENN.

For some time it has been customary on the part of many people to use the words coal-oil and kerosene interchangeably; but the former should be limited to petroleum: and it is to this that we understand our correspondent to refer. First, in relation to the effects of this substance as a poison. Professor Stillé* sums up the symptoms of a number of recorded cases in which the action of petroleum, when taken in excessive quantities, was oppression, giddiness, palpitation, faintness, and headache, but no tendency to stupor or even sleep. In one case, violent convulsions were attributed to fear, rather than the action of the oil. In another case, where a large quantity was taken in the belief that it was beer, the pulse fell from 82 to 48, the pupils were contracted, the skin was hot, the respirations hurried, and the voice was weak. It is mentioned as remarkable that there is no tendency to vomiting or diarrhœa. In only one case, where a glass of petroleum was swallowed, had death occurred, and that was on the twentieth day, with symptoms of gastro-enteritis, although the primary symptoms were not severe.

* *Therapeutics and Materia Medica*, 4th Ed. vol. I., p. 404.

Clemens, of Frankfort,* relates a case where about two-thirds of a glass of petroleum was taken in mistake for wine. There followed immediately oppression of breathing, palpitation and dizziness, the pulse was small, and the patient feared that he was losing his senses. He was treated with strong coffee, cold applications to the head, and fresh air, and at the end of a couple of hours was able to go home.

In 1869 Dr. Theodore Meyer, of Illinois,† reported a case in which a child, eighteen months old, was poisoned by the administration of a tablespoonful of petroleum by another child. It was cyanotic, and respiration had ceased. By enemata of vinegar, dashing cold water over the face and chest, warm frictions of the extremities, and perseverance in efforts to cause artificial respiration, breathing was re-established. Violent emesis of petroleum mixed with the contents of the stomach followed, and a mixture of warm milk and egg was then forced down. The patient recovered.

From these cases it would appear that a proper course of treatment would be to evacuate the stomach, maintain respiratory movements, and administer stimulants.

Regarding the therapeutic powers of petroleum, although it is not officinal in the pharmacopœias of either the United States, Great Britain, or France, it has been used for certain affections since a remote period. The German Pharmacopœia contains it under the name of "Oleum Petræ Italicum." The Arabs long ago alluded to its emmenagogue and diuretic qualities, to its use in asthma and cough, for the dressing of wounds and the expulsion of worms. Externally they employed it as an embrocation in paralysis, chronic rheumatism, and to relieve chilblains.

Seneca oil is a variety, and Haarlem oil a preparation of petroleum. As a cure for scabies it is thought by many to be superior to sulphur, and in several public institutions in this country it has been used to exterminate lice. Diluted with olive-oil or glycerine, it has been employed as an application in prurigo. Internally it is used as an expectorant in asthma and chronic coughs unattended with inflammation; as a cure for rheumatism; in paralytic affections; as a substitute for copaiva in treatment of gonorrhœa, and in cholera of course. Vesicles may result from its free application to a tender skin, but they are comparatively painless and heal readily.

A New Zealand physician has given teaspoonful doses of it every other night with a wine-glassful of water, for the treatment of chronic rheumatism; a little salt, previously dissolved in the mouth, palliating the unpleasant taste. The ordinary dose is ten to thirty drops in some mucilaginous vehicle. In *Griffiths' Universal Formulary*, page 435 (Ed. of 1874), are a variety of formulæ, *e.g.*, "British Oil," embrocations for dropsy, chilblains, frozen limbs, and chronic rheumatism, and anthelmintic (tape-worm) and diuretic mixtures.

Panama Essence.—This preparation is recommended as a superior agent for removing stains from clothes, and for cleaning and washing all kinds of wearing apparel, etc. For removal of stains the mixture is used undiluted, for washing purposes it is mixed with five or six times its bulk of water. It is prepared as follows: 7 kilogr. (=15½ lbs.) of white castile soap, and 600 gm. (1$\frac{5}{16}$ lb.) of sodium carbonate are dissolved in 100 litres (26½ gals.) of hot water, to which are added 500 gm. (1$\frac{3}{16}$ lb.) of extract of Panama-wood; this is solution *A*. In another vessel 15 litres (4 gals.) of fresh ox or sheep gall are mixed with 1½ litres (about 50 fl. oz.) of ammonia of 22°, heated, the clear liquor decanted, and when cold mixed with 15 litres (4 gals.) of alcohol of 90°; this is solution *B*. For use ¼ of solution *A* and ¾ of solution *B* are mixed, and if desired, flavored with some aromatic essence.

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* *Deutsche Klinik*, 1865.
† *Medical Archives.*

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On page 53 of this volume we have already given a notice of the English edition of this work. As will be seen, Mr. Lea has republished it in this country, under the editorship of Dr. John Green, of St. Louis, who has omitted the portions of the original of interest to English readers only. Additional cuts have been given, and the lithographic plates of the original have been replaced by wood-cuts of superior character. The additions by the editor are nearly all in the form of detached foot-notes, and are quite practical in their nature. A sheet of test-types, drawn upon the scale of Dr. H. Snellen, is added, which, being mounted on a card, can be used independently of the book. We will reiterate our opinion that, for the use of either the student or the general practitioner, Dr. Carter's book is all that could be desired. While it is very comprehensive, it is equally practical.

The Polytechnic Review, devoted to Science as Applied to the Useful Arts. William H. Wall, Ph. D., and Robert Grimshaw, Ph. D., Editors and Proprietors.

The above periodical of eight pages (11½ × 15½ inches) has recently been added to our list of exchanges, and is so good in its quality as to merit a notice on our part. While largely devoted to civil and mechanical engineering and metallurgy, it has a department devoted to chemistry, physics and technology. It has recently been changed from a monthly to a weekly issue, and contains fresh and readable matter, well illustrated with wood-cuts. Subscription is $3.00 per annum.

BOOKS AND PAMPHLETS RECEIVED.

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TRADE NOTES.

Extract of Malt.

IT is well-known that in the process of germinating, barley developes a principle called diastase, which, when brought into contact with starch, under the conditions of warmth and moisture, converts it into glucose. Liebig took advantage of this property when he directed malt-flour to be mixed with wheat flour in the preparation of his "Food for Infants;" and it is believed that in the preparation called "Extract of Malt" the diastase, although small in proportion, is quite as important an element therapeutically as the saccharine or other constituents. At the last meeting of the American Medical Association, Drs. F. H. Davis, of Illinois, and others, spoke of the value it had been to them in their practice, especially in the treatment of chronic phthisis; and in Germany where malt extracts, simple and ferrated (see page 235) have for some time been included among pharmacopœial preparations, the extract has been extensively employed in conditions attended with imperfect digestion of starchy food and feeble assimilation, and there is little question that it deserves a more extensive use by physicians in this country than it has at present.

Some care is necessary in its preparation as regards the degree of heat to which it is subjected, the rapidity of its evaporation, etc., and it may yet be found advisable, for the sake of pharmacists who would like to make it themselves, to include the formula for its manufacture among those of our Pharmacopœia.

In addition to the samples which we have already noticed, we have received from the "Trömmer Extract of Malt Co.," of Fremont, Ohio, some specimens of their manufacture which are quite unexceptionable in every respect, so far as we have been able to judge by personal inspection short of analysis. They are agreeable in taste, uniform in consistence, free from any appearance of being overheated, and in addition to the simple and ferrated extracts are prepared with substances which are intended to modify nutrition, viz.: citrate of iron and quinia, 4 gr. to the dose; 5½ grains, in all, of the hypophosphites of lime, soda, potassa and iron, to the dose; one grain each of the iodides of manganese and iron to the dose, and an "alterative" formula containing the iodides of calcium and iron, and the chlorides and bromides of calcium, magnesium, sodium and potassium. Whether the presence of these substances is calculated to affect the properties of the diastase prejudicially we cannot say, though it is hardly probable in the case of the ferrated, since its combination with the pyrophosphate of iron and the citrate of ammonium is officinal in Germany. We shall be glad to receive, from any of our readers, their opinion of the value of any one of these formulas based upon a trial in practice.

Leube's Meat Solution.

THE solution of meat recommended by Prof. Leube in his treatise "Ueber die Therapie der Magenkrankheiten" in No. 62 of Richard Volkmann's *Sammlung Klinischer Vorträge* is intended to replace the common and costly process with natural pepsin, which is, besides, objectionable on account of the disagreeable taste and smell of the product. One thousand grammes of lean beef are placed in a porcelain pot with 1,000 c.c. of water and 20 c.c. of pure hydrochloric acid. The mixture is heated in a Papin's digester from 10 to 15 hours. The mass is then stirred and boiled 15 or 20 hours more without the cover of the digester being lifted. It is now neutralized with carbonate of soda and evaporated to the consistence of pap. By this process the muscular fibres are broken into a fine detritus and the greater part of the albuminoid constituents dissolved.

This preparation has been employed upwards of three years in Germany and for two years prominent physicians in this city have used it in their practice with unqualified success. At the instance of the latter, Mr. Fred. Hoffman, Apothecary and Chemist, of 197 Sixth Avenue, has for some time been making the solution according to Professor Leube's and Rosenthal's method, and puts it up in pound bottles which retail at $2, or $16 per dozen.

The solution is said to be well borne and willingly taken, but it is better to use some other easily digestible food therewith, in order not to disgust by too constant use. The taste may be improved by the addition of Liebig's extract. The dose recommended is a tea or tablespoonful (or more if necessary). When stimulants are admissible, a pleasant flavor may be given to the meat solution by diluting it with an equal quantity of iced water, and adding one or two teaspoonfuls of sherry, port, or brandy, for every tablespoonful of the meat solution, just before taking it.

Gelatine-Coated Pills.

WE have recently had an opportunity for examining a number of the novelties in gelatine-coated pills (oval) made by McKesson, Robbins, & Co. The following having attracted our attention, viz.: 3 gr. extract of Guarana, ½ gr. extract of Grindelia robusta, 2½ gr. of salicylic acid, and 5 gr. pills of Dover's powder; pills composed of the hypophosphites of lime, soda, potassa and iron, and some beautiful little pellets of ⅛ gr. morphia sulph., of $\frac{1}{50}$ gr. arsenious acid, and $\frac{1}{16}$ gr. of the biniodide of mercury. It has struck us in seeing a number of these together, that in one respect they have an advantage over opaque coatings, that, from the transparency of their covering the color of the pill mass is clearly distinguishable, and by this means it may be possible to identify the character of the pill from its appearance. For example, the vermilion red of the biniodide, the buff color of the salicylic acid, the waxy white of the hypophosphites, and the brown of the Dover's powder, were strongly contrasted and would serve to distinguish them at once. As for the solubility of the coating, after taking a swallow of water, and clearing the mouth of all excess of moisture, a two-grain bi sulphate of quinia pill was taken on the upper surface of the tongue, and moved slightly about between the tongue and roof of the mouth. In twenty seconds, the taste of the quinine was perceptible by the tip of the tongue; at the end of thirty seconds the taste was quite apparent over a considerable amount of surface; at the end of the minute there was no gelatine remaining on the pill, so far as we could detect by the tongue and teeth; and by the expiration of another half minute we could appreciate no further need for rolling the bitter thing about our mouth and incontinently swallowed it out of the way.

As for the consistency of the mass, the Neuralgia pills (Brown-Séquard's) could be compressed between the fingers and given almost any shape, the coating remaining intact. The same could be said of the pills of 1 gr. of iodide of iron. The pills of Ext. of Grindelia robusta, could easily be indented with the thumb-nail. The "compound hypophosphites" yielded readily to the point of a knife; the Dover's powder flattened out under pressure of a screw, while most of the others gave angular fractures under the same force.

Alum, Tannin, and Oxide of Zinc in Sticks.—When these substances are to be carried into the neck or body of the uterus they are liable to break and become troublesome. It has been attempted to incorporate them with glycerine, but unsuccessfully. Mr. Duquesnel is using gutta-percha, which he mixes with the medicinal substances by means of heat. While the combination is still hot it is rolled into cylinders a few lines thick, which harden on cooling. It remains to be proved that the astringent effects are not hindered by the gutta-percha.

NEW PATENTS AND LAWS.

TRADE MARKS REGISTERED IN U. S. PATENT OFFICE.

Certificates dated June 20, 1876.

3,789. **Cologne.**—B. W. Dows & Co., Lowell, Mass., "words 'East End' and the figure representing a three-cornered vial."

3,791. **Homœopathic Globules.**—A. J. Frantz, Geneva, N. Y., "words 'Page's Homœopathic Globules' together with the words 'Page's Trade-Mark,' printed within three links.

3,793. **Liniment.**—John Halloway, Wadsworth, Nev., "letters 'J. H.' in the form of a monogram."

3,595. **Double Aprons for Medical Purposes.**—William G. Heaney, Camden, N. J., "letters 'D. A. B. D.'"

3,801. **Medical Compound.**—Philip G. Weaver, New York, N. Y., "the designation 'Lion,' whether expressed pictorially or by the written or printed word 'Lion.'"

Certificates dated June 27, 1876.

3,803. **Brushes for Toilet Purposes.**—Deschamps, Maurey & Co., Paris, France, "the figure of a phœnix and the representation of a star under each of its wings."

3,804. **Brushes for Toilet Purposes.**—Deschamps, Maurey & Co., Paris, France, "the figure of a griffin, represented with a paw resting on a ball, the latter being provided with two stars."

3,811. **Natural Mineral Spring Water.**—A. Hawley Heath, New York, N. Y., "word 'Asahel.'"

3,813. **Medical Compound.**—Daniel Langell, Apple Creek, Ohio, "the representation of a man in a sitting posture, and leaning forward while he is inhaling smoke of my said compound burning on a plate."

3817. **Medicinal Candy.**—Robert J. Murray, New York, N. Y., "word and figures 'Buchu, 1876' enclosed within a circle, and the words 'Murray's Candy.'"

LABELS REGISTERED IN THE U. S. PATENT OFFICE.

Certificates dated June 20, 1876.

763. **"Natural Friedrichshall Bitter Water."**—Bouche, Fils & Co., New York, N. Y.

764. **"Standard Liniment and Pain Destroyer."**—N. J. Hatheway, Houlton, Me.

766. **"Hambro' Tea."**—A. Kessner, Paradise Valley, Pa.

767. **"Bull's Blood Mixture."**—A. C. Meyer & Co., Baltimore, Md.

768. **"Schiedam Holland Schnapps."**—Paris, Allen & Co., New York, N. Y.

769. **"Van Buskirk's Tonic Ginger Invigorant."**—Richard Van Buskirk, New York, N. Y.

Certificates dated June 27, 1876.

770. **"Lord's Malaria and Liver Pills."**—Walter H. Beadle, Brooklyn, N. Y.

771. **"Cedron."**—Sarah J. Nixdorf, Lancaster, Pa.

772. **"Grandma Nixon's Infallible Diarrhœa Cure."**—E. Smith, Brooklyn, N. Y.

776. **"Calman's Cough Balsam."**—W. W. Whipple & Co., Portland, Me.

777. **"Peptonic Pills."**—John Wyeth & Brother, Philadelphia, Pa.

Certificates dated July 4, 1876.

779. **"Green Hoof and Healing Ointment."**—Frank M. Gilham, San Francisco, Cal.

783. **"Sachet Powders."**—Theodore Metcalf & Co., Boston, Mass.

784. **"Scott's Emulsion of Cod-Liver Oil."**—Scott & Bowne, New York, N. Y.

NEW PATENTS.

[*We will furnish gratis, to subscribers, any information relating to new patents which can be obtained from the Official Gazette of the Patent Office; and for 50c. will give copies of the drawings of such as are illustrated.*]

Patents granted June 6, 1876.

178,264. **Paints.**—David E. Breinig, Brooklyn, N. Y.

178,269. **Processes and Apparatus for Treating Lard.**—Richard Bullymore, Buffalo, N. Y.

178,277. **Explosive Compounds.**—Adolf Dieckerhoff, Vienna, Austria.

178,283. **Vaginal Syringes.**—A. J. French, Portsmouth, N. H.

178,315. **Preparing Bone-Black.**—Orajio Lugo, New York, assignor of one-fourth his right to Joseph Gaudolfo, Brooklyn, N. Y.

178,319.—**Water-Proof Compounds.**—H. F. H. Miller, Boston, Mass.

178,320. **Gas Retort Lid-Fastenings.**—H. G. Morris, Philadelphia, P. A.

178,329. **Mucilage Bottles.**—Joseph A. Robbins, Boston, Mass.

178,362. **Inhalers.**—George L. Crosby, Hannibal, Mo.

178,391. **Microscopes.**—George Wale, Fairview, N. J.

178,420. **Distilling Apparatus.**—Henry Deymann, Toledo, Ohio.

178,446. **Processes of Preserving Food.**—Kennard Knott, Chicago, Ill.

178,458. **Pessaries.**—Gustav Otto, Jersey City, N. J.

178,489. **Oil Cabinets.**—G. A. Unkrich, Fairfield, Iowa.

178,490. **Processes of Manufacturing Manganese Alloys.**—W. P. Ward, Barton Co., Ga.

178,491. **Tanks for Asphaltic Cement.**—C. M. Warren, Brookline, Mass.

178,495. **Fruit and Jelly Presses.**—Andrew Wemple, Chicago, Ill., assignor to Jay W. Powers and F. M. Melick.

Patents granted June 13, 1876.

178,573. **Liquid Measures.**—J. W. Wilkinson, Meadville, Pa.

178,596. **Vaginal Syringes.**—James T. Butterick, Newport, R. I.

178,611. **Voltaic Belts.**—Alex. M. Dye, Elkhart City, Ill.

178,629. **Scale-Beams.**—Hiram L. Grissell, Penville, Ind.

178,697. **Combined Funnels and Measures.**

178,745. **Bottle-Stopper Fastenings.**—Ernest Dreher, Newark, N. J.

178,756. **Remedies for Hog-Cholera.**—William J. Galt, Sterling, Ill.

178,803. **Liquid Measures.**—J. J. Roberts, Gedes, N. Y.

178,804. **Trusses.**—Carl Seidel, Hanover, Prussia.

178,816. **Spaying Instruments.**—Joseph L. Turner, Plainsburg, Cal.

PRESCRIPTIONS AND FORMULÆ.

Selected Hospital Formulæ.—(Continued from last number.)

Mist. Anti-Rheumatica. B. H.

℞ Sod. et Pot. Tart. ..... ʒss ℈ ½
Potass. Nitr. 3
Vin. Sem. Colchici ..... ʒss 2
Aquæ ..... q. s. ad. ʒss 2
M. Teaspoonful.

Mist. Hammond (Vance).

℞ Ferri Pyrophos. ..... } ää. ʒ 1
Quin. Sulphat ..... }
Strychniæ ..... gr. 1
Ac. Phosph. Dil. (terhydr.) ..... ʒ 2
Syr. Zingib. ..... } ää. p. e. ad fl. ʒ 4
Aquæ ..... }

Linim. Chloroformi. Ch. H.

℞ Chloroformi ..... ʒ 2
Tr. Opii ..... ʒ 2
Linim. Sapon. ..... fl ʒ 1½
M.

Buck's Burn Mist.

℞ Pulv. G. Tragacanthæ ..... ʒss 2
" G. Acaciæ ..... ʒss 4
Syr. fusci (Molasses) ..... fl. ʒ 16
Aquæ bullient. ..... pint 1
M.

Mist. Rhei et Sodæ.

℞ Sod. Bicarb ..... ʒ 1
Pulv. Rhei ..... ½
Tr. Menth. Pip. ..... ʒss 2
Aquæ ..... q. s. ad ʒ 4
M. Tablespoonful.

Carbolic Collodion.

℞ Collodion ..... ʒ 1
Ol. Ricini ..... } ää. dr. ½
Acid Carbol ..... }
M. To replace the nostrum called "Carbolic Acid Plaster."

Lent's Solution of Quinia.

℞ Quiniæ Sulphat ..... grs. 80
Aquæ ..... fl. ʒ 1
Heat to boiling, add enough dil. Sulph. Acid to dissolve it, and then Acid Carbolic ..... grs. 5
M. Used subcutaneously.

Pil. Quin. et Ferri.

℞ Quin. Sulph. ..... gr. 40
Ferri Sulph. ..... " 20
Ext. Nucis Vom. ..... " 5
M. 20 Pills.

Pil. Aloes et Ferri.

℞ Ferri Sulph ..... gr. 10
Pulv. Aloes. ..... " 6
" Zingib ..... " 8
Ext. Nucis Vom ..... " 2
Confect. Rosæ ..... q. s
M. 10 Pills.

Pil. Segur.

℞ Pulv. Aloes. ..... gr. 20
Ext. Coloc. Co ..... } ää. " 10
" Hyoscyam. ..... }
" Nucis Vom. ..... " 5
M. 10 Pills.

Pil. Triplex.

℞ Pil. Hydrarg ..... }
Res. Scammon ..... } ää. gr. 10
Pulv. Aloes. ..... }
M. 10 Pills.

Rags Pills.

℞ Pulv. Rhei. ..... }
" Aloes ..... } ää. gr. 10
" Gentian ..... }
" Sapon ..... }
M. 10 Pills.

Chloral-Cream.

White Sugar, finely powdered, 100 parts.
Chloral Hydrate ..... 5 "
Water ..... 15 "

Dissolve the Chloral Hydrate in the water and rub the solution with the sugar in a mortar. It may be flavored to taste with pineapple-essence, peppermint, or vanilla. One grain of Chloral Hydrate is contained in 24 grains of the mixture, and a teaspoonful holds about 3 drachms, equivalent to 7½ grains of chloral.

Remedy for Toothache.

Acid Carbol. sat. sol. }
Tr. Opii ..... } ää. 2 parts.
Extr. Fl. Aconiti ..... }
Ol. Menth. Pip. ..... 1 part.

Cotton moistened with this, is to be introduced into the hollow tooth.

Syrupus Ferri Lactophosphatis (Jehl).

Dissolve 50 parts of pure ferrous sulphate and 150 parts sodium phosphate, each in 750 parts of water, filter the solutions, mix them, wash the precipitate with distilled water, place it into a porcelain dish, add to it 60 parts of concentrated lactic acid, stir, allow to deposit and dilute with water to 1882 parts. Heat the liquid with 3586 parts of sugar to form a syrup, which is finally flavored with 50 parts of essence of lemons.

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, providing they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue.*]

D. S. C. (Rockford, Ill.)—In the two formulæ published in our last number, page 222, namely, "Loomis' Tonic" and "Lemon Tonic," the *sol. quin. sulph.* and *sol. cinchon. sulph.* refer to standard solutions kept ready made in the shop, and prescribed directly under those names. The first is made by dissolving sulphate of quinia in water, with the aid of dilute sulphuric acid, of such a strength that 1 fl. oz. contains 15 grs. of the salt. The second is made in a similar manner, but of double the strength. In hospitals and in stores where a large prescription business is carried on, many salts are constantly kept in solution for immediate use, it being more convenient to measure out the required quantity, already in solution, than to weigh the

salt and then dissolve it. The more common solutions kept are the following: Potass. Bicarb., 1 ʒ in 4 fl. oz.; Potass. Chlor., 1 in 16; Potass. Bromid., 1 in 4; Potass. Iodid., 1 in 1; Sod. Carb., 1 in 12; Ammon. Carbon., 1 in 4; Ammon. Mur., 1 in 4; Magnes. Sulph., 1 in 2; Chloral. Hydr., 1 in 2. The last should only be kept in moderate quantities, not to exceed a supply for 24 hours.

D. D. S. (Oil City, Penn.)—The *Spiraea* you inquire about must be *Spiraea ulmaria, L.*, the water distilled from which was recommended a short time ago by Patrouillard as a menstruum for preparing stable solutions of various alkaloids, especially morphia. It is supposed that the salicylous acid contained in the water prevents the development of fungi.

W. G. (N. Y.)—We are not aware of any house in this country which deals in *Vanadium* to any greater extent than to supply small samples as specimens. Dr. Isidor Walz, of New York, has lately ascertained its presence in a great number of American hæmatites, and it is not unlikely that in a short time it will be found to pay to extract it systematically. But there is a German firm which is ready to supply the metal and its salts in reasonable quantities, the demand having lately arisen for the manufacture of aniline black and indelible ink (see above, page 144). The firm is: "Deutsche Gold- und Silberscheide-Anstalt," vorm. Roessler, in Frankfort on Main.

Freckles. (J. W. J., New Jersey).—The spots on the skin called freckles are probably of two kinds: one, occurring in persons with light complexion, from exposure to the sun, is caused by a deposit of pigment or melanin in the rete Malpighii and is of the nature of chloasma (or "moth"), melasma, the areola of the breasts in pregnancy, etc.; while the other variety is more deeply seated, and, like the pigment of the colored races, dark moles, etc., is deposited in the corium. The former variety is comparatively transient, and is said to be as successfully treated by spirituous lotions and weak mineral acids, applied several times during the day, as by any other method. At one time and another, however, a large number of cosmetics have been recommended, of which the following represent some of the more recent:

℞ Zinci sulphocarbol	2	parts.
Glycerine	25	"
Aq. Rosæ	25	"
Spiritus vini rect	5	"

Dissolve and mix. The freckled skin is to be anointed with this twice daily—the ointment being allowed to stay on from one-half to one hour, and then washed off with cold water. Anæmic persons should also take a mild ferruginous tonic. In the sunlight a dark veil should be worn.

Another formula containing the sulphocarbolate of zinc is quoted from the *Bulletin Gen. de Therap.* as follows:

A solution of corrosive sublimate either pure or mixed with cyanide of mercury is commonly employed for the removal of freckles; but a collodion containing ten per cent. of its weight of sulphocarbolate of zinc has given excellent results without being accompanied by any of the dangers attending the use of the mercurial solution.

The following formula is an excellent one:

℞ Sulphocarbolate of zinc	1 part.
Collodion	45 parts.
Oil of lemon	1 part.
Absolute alcohol	5 parts.

The sulphocarbolate of zinc should be reduced to an extremely fine powder, and should then be thoroughly incorporated with the fluid mixture.

℞ Pulv. sinapis alb	ʒ iij.
Olei amygdal	ʒ ss.
Succi limonum, enough to make a thick paste.	

Mix. To be applied as an ointment.

℞ Hydrarg. perchlor	gr. v.
Acid hydrochlor	gtt. xxx.
Sacch. alb	ʒ i.
Spt. vin. rect	ʒ ij.
Aquæ rosæ	ʒ vii.

To be used as a lotion.

It is also stated that powdered nitre, moistened with water, applied to the face night and morning, will soon remove all traces of freckles.

Our grandmother used to have a remedy in buttermilk, with which, in our youthful days, our faces used to be scrubbed on Saturday nights, to clear them of sunburn and freckles for Sunday morning.

Constant Reader (Charleston, Ill.).—Please send us your name, and we shall be happy to respond.

Soluble Glass. (J. D. M. & A. J. F., Iowa).—The solution can be laid on the wall with a broad, flat brush, like a kalsomine brush. The process you ask for we will send to you direct.

F. E. Y. (Texas).—Your note is answered by mail.

Treatment of Dandruff. (L. C. R., Baltimore, Md.)—The following is said to have worked well after failure with many other remedies. Mix an ounce of sublimed sulphur with a quart of water; shake the mixture thoroughly at intervals of a few hours and then, allowing it to settle, decant the clear liquid, with which the head is to be thoroughly wet every morning. It is reported, by one who has tried it, that in a few weeks every trace of dandruff had disappeared, the hair became soft and glossy, and at the end of eighteen months after the treatment was discontinued, there was no return of the disease.

Weak ammonia-water applied to the scalp once a day is also recommended.

Collodion-coated Pills. Ch. A. D. (Detroit, Mich.)—To cover pills with collodion, affix each to the point of a fine needle, dip it into collodion, rotate it in all directions until the mass has been uniformly distributed, and stick it into a needle-cushion, sand-bag, or other convenient receptacle, until dry.

Bromine-bottles. Eug. E. (Brooklyn, N. Y).—We are not at all surprised at the accident you met with; indeed we must wonder that you were not more severely injured. You will, no doubt, now remember that it is unsafe to try to open a bromine-bottle, having a fixed stopper, by holding it over a light. Always consider the nature of the contents of a bottle, and the consequences, if the bottle should break. Bottles containing collodion, ether, alcoholic tinctures and other inflammable liquids, or acids, and irritating agents like bromine, must not be opened in this manner. In the case of bromine, if we happen to meet with an obstinate bottle, we place it into a mortar, cover it with water, and break the bottle by a gentle blow with the pestle. It is then easy to remove the bromine.

Unguentum Ægyptiacum. Th. C. (N. Y).—This ointment was officinal in the London Pharmacopœia of 1721, and has subsequently received the following synonymes: Mel Ægyptiacum, Lond., 1746; Oxymel Æruginis, Lond., 1788, Dubl., 1807; Oxymel Cupri Acetatis, Dubl., 1826; Linimentum Æruginis, Lond., 1836; after which time it was dropped. The last formula was: Verdigris, powdered ʒ i.; Vinegar, fl. ʒ vij.; Honey (despumated), ʒ xiv.; dissolve the verdigris in the vinegar, and strain through a linen cloth; afterwards, the honey being poured in, boil down to a proper consistence.

Foreign Pharmacopœias. G. W. C. (U. S. A).—So far as we are aware, there has been no special Hungarian Pharmacopœia, within the century at least. The Austrian Pharmacopœia is by law the standard authority for the whole empire. Turkey has no pharmacopœia. The practising physicians either belong to the old school or to the new. The former are of various eastern nationalities: Osmanlis, Armenians, Arabs, Georgians, etc., who employ

a promiscuous catalogue of remedies, tempered with religious and sympathetic "cures"; the latter are either Franks, that is, western Europeans who have received a regular medical education, and who prescribe, each according to his own pharmacopœia, or they are Greeks, who mostly are tolerably well educated also, or else they are Turks educated in western Europe. The latter mostly use the French Pharmacopœia. Some of the latter are men of great skill and learning, and pharmacy especially is well represented by Dr. Houssein Effendi, Professor at the Imperial School for Medicine (author of a large treatise on "The Science of the Pharmacist," in Turkish, published in 1871).

Determination of Free Acid in Wine. E. S. Th. (Vallejo, Cal.).—Although occasionally other acids, besides tartaric, are met with in wines, it is usual to regard the free acid as tartaric, and to determine it as such. To this must also be reckoned one-half of the acid existing in the cream of tartar in solution in the wine. The usual method of determination is the following (*Hager*): 250 gm. or cc. of the wine are mixed with enough alcohol to raise the alcoholic percentage to 15 or 17, a concentrated solution of 3 to 4 gm. of neutral potassium tartrate is added drop by drop, and the mixture stirred briskly for a minute. After three hours all cream of tartar has settled down, at a temperature of 12° to 15° C. The crystalline precipitate is collected on a filter, washed first with dilute, then with 90% alcohol, dried and weighed. Its weight, multiplied by 0.4, gives the amount of free acid in 250 gm. or cc. of the wine. Or the acidity may be determined volumetrically, by standard alkali solution.

Baking Powder, B. and S. (P. Y., N. Y.) *Baking Powder* is commonly made by mixing three parts of dry sodium bicarbonate with 3 parts of farina, and intimately incorporating with it 2 parts of dry tartaric acid. The mixture must be put up and kept in air-tight cans or boxes, and must be well protected from moisture, as this would start the reaction between the acid and alkaline carbonate. A superior article is *Horsford's Baking Powder*, consisting of two separate packages. One is pure powdered sodium bicarbonate; the other is a powder prepared by incorporating starch with a syrupy solution of acid phosphate of calcium and magnesium (Horsford's acid phosphate, obtained by decomposing bone-ash with sulphuric acid), and drying the mixture. Special small measures, calculated for 1 pound of flour, with directions, are furnished with the packages. Generally 3 to 3½ parts of the acid powder are required for one part of the alkali. *J. Liebig* has recommended to add to the alkaline powder a salt of potassium (the chloride). According to his investigations (*Dingl. pol. Journ.*, 191, p. 160) there are required for 50 kilos (110¼ lb.) of flour: 1,338 gm. (about 47¼ oz.) of acid powder, and 841 gm. (about 29¾ oz.) of alkaline powder, consisting of 446 gm. (about 15¾ oz.) of sodium bicarbonate, and 395 gm. (about 14 oz.) of potassium chloride.

F. T. (N. Y.) The "new" remedy you inquire about is not new in reality, it having been in use for at least nine years in Europe and in this country, but only to a limited extent. It is the herb *Rhynchosia excavata*, a native of China and Cochin China, nat. fam. Leguminosæ, and is called *Tsa-Tsin*. It is said to be an infallible remedy for all obstructions of the monthly periods, especially if taken on such days when the menses are expected, or when nature indicates efforts to establish the same. The directions are to boil ½ ℥ with 3 cupfulls of water for 10 minutes, to strain and to administer the infusion. In obstinate cases, the dose may be doubled. If it has the effect ascribed to it, it must be used with caution!

Aniline Blue and Red, according to Prof. Herschel, dissolved in glycerine, will give a permanent dark rosy-red stain to tissues which have undergone amyloid degeneration, healthy portions assuming a blue color.

ITEMS.

Medicine Under the Kings of Wales.—King Howel the Good (Howel Dda) had twenty Court officers, viz., twelve for the King and eight for the Queen. The Physician comes twelfth in order. He ought to have his land free and his horse in readiness; and he receives his linen clothes from the Queen and his woollen clothes from the King. His seat in the hall is at the base of the pillar, that he may be near where the King is, sitting in his border. His lodging is with the master of the household. His protection is from the time the King commands him to visit a wounded man, neither in the palace nor belonging to it, until he goes to him, taking away the offender. He must give medicine gratis to all the officers in the palace and to the master of the household, their bloody clothes excepted; unless it be one of the three dangerous wounds. These are a blow on the head which penetrates the brain, a thrust in the body which penetrates the bowels, and the breaking of one of the limbs. For every one of these three dangerous wounds the Physician is entitled to one hundred and eighty pence and his meat, or to one pound without his meat, and also the bloody clothes. He claims twenty-four pence for a tent for a wound. A plaster of red ointment is twelve pence; and one of the medicinal herbs is eight pence. The physician's pan is worth a penny. He ought to take security of the family of the wounded man, lest he die of the medicine he administers to him; and if he should not take it, he must answer for the consequence. He ought never to leave the palace except with the King's permission. The fine for insulting him is six cows and one hundred and twenty silver pennies. His value is one hundred and twenty-six cows.—This extract is copied from *The Ancient Laws of Cambria*, translated from the Welsh by Mr. William Propert, pp. 108 and 109. There is also (1) a copy among the Harleian MSS. in the British Museum; (2) a copy among the Cotton Collection in the British Museum; (3) A MS. in the Welsh School, London.—J. E. JONES, in the *Br. Med. Jour.*

German Amber.—The extent of the amber fields in Germany may be seen from the fact that twenty-two dredges, two tug-boats, one hundred barges, and one thousand laborers are engaged in the industry. The area of the amber field is extensive, and the Government derive from it a yearly rent of 72,200 thalers.

Artificial India-Rubber.—A cheap and useful substitute for India-rubber is prepared by mixing a thick solution of glue with tungstate of soda and hydrochloric acid. A compound of tungstic acid and glue is precipitated, which, at a temperature of 86° to 104° F., is sufficiently elastic to admit of being drawn out into very thin sheets. On cooling, this mass becomes solid and brittle, but on being heated again, soft and plastic. This new compound can be used for many of the purposes to which rubber is adapted.

Poisoned Arrows—A detailed description of the poisoned arrows of the Papuans, such as those with which Commodore Goodenough, of the British Navy, was recently killed in the South Pacific, has been received from private sources by Dr. J. D. Hooker, President of the Royal Society. It seems that the points consist of needle-like bits of human bone, which are plunged into a human corpse, and poisoned by being allowed to remain there a number of days. A very slight scratch by arrows thus treated is absolutely fatal, poisoning the blood of the victim, who dies with symptoms resembling those of lockjaw, although no ill effects are usually experienced from the wound until a number of days after its infliction. To distinguish them from ordinary shafts, these poisoned arrows are handsomely carved and elaborately painted.

Henry Letheby.—The death of this distinguished physician and chemist, medical officer of health, and food analyst of London, occurred in that city, March 29. He was born in 1816, became bachelor of medicine in 1843, and M. A. in 1858. He was lecturer on chemistry and toxicology in the London Hospital, chemical analyst to the corporation of London, and a fellow of the Linnæan and Chemical Societies. He was the author of "Reports on the Sanitary Condition of the City of London," of numerous papers and reviews, and of what is probably the most useful work on food in the language.

"The Revue de Medecine et de Pharmacie de l'Empire Ottoman" is a bi-monthly from Constantinople. A leading article is a history of medicine among the Arabs.

A New Science College.—The erection of Sir Josiah Mason's Science College is progressing rapidly. The site and buildings will cost about £150,000, while £100,000 are devoted to endowment. A medical school will probably form a department of the college.

Hard Paper.—The French employ chloride of zinc for rendering paper as hard as wood and as tough as leather.

New University in Siberia.—The first Siberian University will be located in Omsk, at the confluence of the Om and Irtysh, 36 degrees directly north of Bombay. It will have a medical and physico-mathematical faculty.

To Preserve the Metallic Lustre of Sodium.—R. Böttger recommends to wash the metal in alcohol, until it shows a clean metallic surface, then to rinse it in pure petroleum ether, and finally to place it for preservation into some of the same petroleum ether, saturated with naphthalene.

Adulterated Coffee.—The *American Grocer*, which always knows about such things, gives a table of the amount of adulteration practised in the country upon consumers of tea and coffee. The sutler from whom the goods were stolen denies the act very vehemently, but such denials are usually most worthless. According to this paper, its New York grocer friends and patrons sell under the name of ground coffee a compound which consists of—

Roasted peas	400	pounds.
Roasted rye	200	"
Roasted chicory	100	"
Roasted other ingredients	50	"
Roast coffee	250	"
Total	1,000	"

"This," the *American Grocer* says, "can be sold *to the jobber at 20c. currency*, per pound, allowing a discount of 10 to 20 per cent., and is sold by retailers at 25c., currency." This is simply atrocious. These ingredients cost not to exceed $80 in all, allowing over 10 per cent. for manipulation, as for instance:

250 lbs. coffee at 20c.	$50.00
400 lbs. peas roasted	9.10
200 lbs. rye roasted	2.40
100 lbs. chicory	5.50
50 lbs. coloring, &c.	1.00

Add $12 for mixing, roasting and waste, and there remains total cost $80. But the article retails at $250, so that between the cost of manufacture and the retail price there is a profit taken from the consumer of actually 320 per cent.

The Unequal Solubility of different Faces of a Crystal.—M. LECOQ DE BOISBAUDRAN has observed the fact, that if an octahedral crystal of ammonio-alumina alum (25 mm. in diameter) with small cubical facets, be placed in a basic solution of the same salt, and the liquid be maintained for a long time just saturated, the deposit of alum takes place solely on the octahedral faces. Hence such a solution is saturated with respect to the octahedral faces, but not with respect to the cubic faces. Consequently a crystal of alum, when growing, may correct its form without any new deposit taking place on the untouched faces.

Satire on the Vivisectors.—A late number of the British Journal of Homœopathy contains a very ironical and smartly written satire on the Vivisectors, by Dr. W. B. A. Scott, in which he *pretends* to advocate the practice of infanticide, as a means, among others, to prevent the rapid increase of population. He says that his cause is identified with that of the vivisectors, and he desires it to be understood that with theirs it will stand or fall. The scheme proposed is this:

No woman, whether married or single, shall be permitted to retain more than two children born of her own body; of the children thus confiscated for the public weal, a certain small proportion shall be preserved alive for scientific purposes to be hereafter specified; the remainder, after having been duly baptized, shall be deprived of life in the most expeditious and painless method possible. Every child of either sex, from the third inclusive, to be thus confiscated, unless one of the first pair shall have died in the meanwhile, in which case the mother shall be allowed to retain one of the succeeding children, of either sex, at her own option, to replace the deceased. In the event of twins being produced at the second birth, or triplets at the first, it shall be in the option of the parents or reputed parents to decide which of the children shall be preserved, unless in the case of one presenting teratological phenomena, interesting in a scientific point of view, when the same may be demanded on behalf of the community on the production of a certificate signed by three professors of physiology or pathology to the effect that the peculiarities are such as to render the infant a just object of scientific curiosity. As a guarantee to the mother that such infants as are to be deprived of life are subjected to no avoidable suffering, the operation of pædoctony shall, if required, be performed in her own presence, and no professor of physiology shall be allowed to assist at the same, either in person or by deputy. The remains of the infant, after dissection and the abstraction of such parts as it may be deemed advisable to make into "preparations," shall be calcined, and restored to the mother in a box of wood or other suitable material, in size not exceeding that of an ordinary writing-desk, nor less than that of an ordinary snuff-box.

We fear, however, that this ingenious scheme is destined to fall through, without the simultaneous downfall of the "Vivisectors," who stand on too firm a ground to be upset by such gusts of satire and irony.

American Tin.—There is a prospect of an early resumption of operations in the Temescal tin mines in San Bernardino County. These mines are situated about 24 miles south-east from the new settlement known as Pomona. During the past ten years but little labor has been performed in these mines on account of a conflict in regard to the title. The property is reputed to be immensely valuable; and it is unfortunate that an industry of so much importance should languish on account of a wrangle over the right of possession. But it appears that the conflicting interests will soon be smoothly straightened out, and that a company of foreign capitalists will vigorously take hold of the work. The prospective operators are wealthy gentlemen from Amsterdam, who are engaged in importing tin from the United States on an extensive scale. The value of the tin annually imported by them is given at $14,000.000. It is stated that they have bonded the Temescal tin mines from the various claimants to the amount of $80,000, and that the money was to be paid on the first of May, and it is believed that the resumption of mining operations will greatly benefit business and property in that section.

British Whiskey Returns.—According to a Parliamentary return, issued on the motion of Mr. Boord, the number of gallons of proof spirit distilled in England in the year 1875 was 9,445,936; the number of gallons delivered, duty paid, from the distillers' stocks, 3,569,699; and the number put into bond, 5,665,054. The number of gallons distilled in Ireland was 10,409,193; the number delivered, duty paid, 117,460; and the number put into bond, 10,262,439. In Scotland the number of gallons distilled was 17,044,196; the number delivered, duty paid, 1,280,869;

and the number put into bond, 15,579,599. The amount of duty paid on British proof spirits, at the rate of 10s. per gallon, was £6,800,129 in England; £4,584,062 in Scotland; and £4,115,087 in Ireland. About 4,500,000 gallons of spirits were removed from Scotland to England, and about 50,000 gallons (nearly all duty free) from Scotland to Ireland; but while 15,000 gallons would cover the whole removals from England to the other countries, there were just 3,000,000 gallons removed from Ireland to England, and over 200,000 gallons from Ireland to Scotland. There were in bonded stores on the 31st December, 1875, in England 4,416,359 gallons, in Ireland 13,630,106 gallons, and in Scotland 9,356,287 gallons. The number of gallons of methylated spirits sent out by licensed persons during the year was 565,190 in England, 269,229 in Scotland, and only 9,434 in Ireland.

Liqueur Chartreuse.—Père Garnier, a monk, lately died at the monastery of Grande Chartreuse, at Grenoble, France, in his seventy-second year. It was he who discovered the celebrated liquor called *Chartreuse*, which is distilled by the monks from aromatic plants grown in the garden of the monastery, and is said to produce an annual revenue of $400,000. After the discovery many similar monastic decoctions were invented: the *Bénédictine*, made by the Benedicts of Fécamp, and the *Trappistine*, made by the Trappist Brothers; but none of these discoveries in the shape of *liqueurs* injured the sale or the fame of the renowned *Chartreuse*—a decoction, the secret of which was kept by Père Garnier.

Artificial Ivory.—The patent taken out by B. S. Cohen, of London, thus describes the method of the manufacture of this article. Ivory-dust is boiled with water to a jelly, and to this is added some shellac dissolved in alcohol, and some oxide of zinc. For every pound of ivory, 1 oz. each of shellac and zinc oxide is taken. The pulpy mass is poured into forms, allowed to become dry in the air, and then subjected to hydraulic pressure. The finished material may be cut, sawed, and turned as well as natural ivory or bone.

Curious Freak of Nature.—Mr. Heussner, of Washington street, near Fifth, Hoboken, has a Maltese cat which devotes its time to hatching hens' eggs. A hen recently set at the same time with her and hatched eight chickens, while the cat's were nine. The tenth she mistook for a rat or a mouse and ate. The hen took charge of both families. She and the hen are now hatching more eggs.

The Cinchona Tree has been introduced successfully into the island of Réunion. The cinchona-seeds were first sowed near the coast, and the young trees subsequently were transferred to an altitude of from 2,000 to 2,500 feet. In four years' time they have grown so well that they have reached a height of over twenty feet.

Glasune is the name of a patented cement, for glass or metal, consisting of a thick solution of asphalt in tar-oil, to which are added a little glycerine and finely powdered red lead.

Animal Beer.—D. Tallermann and W. Clarke, of London, have patented a product, which they call "Animal Beer," and which they prepare from extract of beef (Liebig's or any other) by dissolving in water, filtering, mixing with hops (or hop-extract), charging with carbonic acid, allowing to deposit, and bottling.

Production of Metals in Europe.—According to the Austrian statistician Brachelli, Europe produces at present annually:

Platinum, 1,025 kilos.	Zinc .....150,000 tons.
Gold.....6,900 "	Tin .....10,300 "
Silver..300,000 "	Salt .....5,000,000 "
Iron,12,000,000 tons.	Manganese-ores 80,800 "
Copper, 30,000 "	Antimony ores ....285 "
Lead ..265,000 "	Coal.....218,800,000 "

A Novel Vinegar Manufacturer.—The aquarium of the Jardin d'Acclimatisation at Paris has lately received a very rare present, namely, a polypus resembling a medusa. In a very short time all its companions in the tank died, and on looking for the cause, it was found that the water contained acetic acid, which was produced by the polypus. This remarkable animal is said to produce first alcohol and then acetic acid. The manufacturer has been put into solitary confinement, to enable him to continue his industry without damage to others.

An Electric Woman.—The *Gazette des Hôpitaux* contains an account of a remarkable female patient, who suffers from electric discharges from her hair. Her physician, who was somewhat sceptical at first, acknowledged the genuineness of the case, by having himself received the discharge while touching her hair.

The Preservation of Ice at the Bedside.—For some years it has been the practice of Mr. Sampson Gamgee to cut a piece of flannel about nine inches square, and secure it by ligature round the mouth of an ordinary tumbler, so as to leave a cup-shaped depression of flannel within the tumbler to about half its depth. In the flannel cup so constructed, pieces of ice may be preserved many hours—all the longer if a piece of flannel from four to five inches square be used as a loose cover to the ice-cup. Cheap flannel, with comparatively open meshes, is preferable, as the water easily drains through it, and the ice is thus kept quite dry. When good flannel with close texture is employed, a small hole must be made in the bottom of the flannel cup; otherwise it holds the water and facilitates the melting of the ice, which is, nevertheless, preserved much longer than in a naked cup or tumbler. A reserve supply outside the bedroom door can be secured by making a flannel cup, on the plan above described, in a pitcher, and filling it with little lumps of ice, care being taken that there is space enough below the bag to allow the water to collect and leave the ice dry. This provision will allow ice to be used during the hottest nights without the supply failing or the patient being disturbed—two very important considerations. The real therapeutic benefit of ice is only produced in some cases by its free use, and its soothing and stilling effect must be aided by the most perfect surrounding quiet.

A New Febrifuge.—Dr. Brunette, of Constantinople, recommends the following mixture, as being not only much cheaper but more efficacious than quinine in malarious fevers [?]:

Chloride of sodium.....12 grammes.
Carbonate of iron.....1 gramme.
Mix, and divide into three powders.

These three doses are to be taken in one day; one powder being taken in the morning, another at midday, and the third at night. In order to prevent a relapse, one powder should be given every morning for eight days. He finds it also superior to other antipyretics in tuberculosis, in smaller doses than the above, but continued for a longer time—*The Practitioner*, from *L'Imparziale*.

Chromate of Lead in Ham Coverings.—Professor Bouchardat, of Paris, in his capacity as member of the Council of Hygiene and Salubrity, recently submitted a report to the prefect of police, in which he pointed out that in a specimen of ham, said to be imported from Cincinnati, the ham was enveloped in a cloth saturated with a yellow substance. This yellow substance proved to be composed of the chromate of lead, a most deadly poison. It was suggested in the report that particles of the substance may become detached and be mixed up with the alimentary substances vended by grocers and others, and thus run the the risk of poisoning those who make use of them. By a decree from the police the substances so enveloped were seized and buried under ground, and future supplies are to be treated in a similar manner. Mr. Bouchardat suggested that, if the American purveyors preferred to have a yellow envelope around the alimentary substances they export, the chromate of lead may be replaced by any other yellow substance—turmeric, for instance, which is known to be entirely harmless.